



# Sixth Semi-Annual VRP Progress Report

IMTT Savannah North Terminal  
Savannah, Chatham County, Georgia  
VRP #1440101197

IMTT Epic LLC





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Savannah, Chatham County, Georgia  
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I certify that I am a qualified groundwater scientist who has received a baccalaureate or postgraduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by me or by a subordinate working under my direction.

John A. DiZinno, PE

Printed Name (Professional Engineer)



Signature (Professional Engineer)

11/30/2018



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## 1. Introduction

On behalf of IMTT Epic LLC, GHD has prepared this semi-annual progress report pursuant to the approved Voluntary Remediation Program (VRP) application for the IMTT Savannah North Terminal located at 7 Foundation Drive, Savannah, Georgia (Site). A vicinity map for the Site is included as Figure 1. An aerial photograph of the Site obtained in 2016 is included as Figure 2. A layout of the Site in its current configuration is shown on Figure 3.

### 1.1 Background

The IMTT Savannah North Terminal has been utilized for petroleum refining and storage activities since the early 1900s. Mexican Petroleum first developed the property as a petroleum refinery in 1929. The property was later acquired by American Oil Company (and later Amoco), which continued petroleum operations. In 1993, the property was acquired by CITGO Asphalt Refining (CITGO), and began asphalt refining operations until acquisition by NuStar Asphalt Refining, LLC in 2008. Asphalt refining operations were temporarily halted in 2012. The property was acquired by Axeon Specialty Products (Axeon) in 2014 and thereafter by Epic Midstream LLC (Epic) in December 2015. In January 2018, Epic changes its name to IMTT Epic LLC. The Site has historically been used as a bulk storage and distribution facility for petroleum products. The refinery portion of the Site was demolished during the first quarter of 2016.

In 1989, light non-aqueous phase liquid (LNAPL) was discovered at the Site and a subsequent investigation by Amoco concluded that detected LNAPL was the result of the “gradual accumulation of residual oil over several decades.” Subsurface investigations and LNAPL recovery operations have been conducted in various capacities since the discovery of the LNAPL. Through subsurface investigations, the LNAPL present at the Site has been determined to be petroleum hydrocarbon-based material.

In 1996, Horizontal Subsurface Systems, Inc. installed a 20-foot (ft) deep and approximately 1,500 ft long polyethylene (HDPE) polywall at the Site along the Savannah River. The polywall was positioned at the downgradient edge of the Site to prevent the migration of LNAPL to the Savannah River. Portions of the polywall were exposed through excavation by Axeon in June and July of 2015. Upon inspection, the exposed sections of the polywall did not show any signs of delamination, degradation, or deterioration. The installation of the polywall has proved to be a success and an effective method of providing containment for the LNAPL plume.

On August 8, 2015, a VRP application or Voluntary Investigation and Remediation Plan (VIRP) was submitted by Axeon to the Georgia Environmental Protection Division (GAEPD) for the Site. Following submittal of the VIRP, Terracon, on behalf of Axeon, performed additional investigation at the Site and the results were summarized in a Site Investigation Summary Report (SISR) submitted to Georgia EPD on September 15, 2015. Additionally, Langan Engineering and Environmental Services (Langan) evaluated the LNAPL at the Site and identified potential LNAPL recovery approaches for implementation at the Site that were described in a Technical Memorandum to Axeon that was submitted to Georgia EPD on October 29, 2015. The SISR and Langan Technical Memorandum were submitted to supplement the August 2015 VIRP.



In correspondence dated November 24, 2015, the Georgia EPD stated that the Site had been approved for participation in the VRP with comments and was assigned VRP #1440101197. Epic purchased the Site from Axeon on December 22, 2015 and on January 14, 2016 Epic submitted a revised VRP application and checklist to reflect the ownership change from Axeon to Epic. On December 13, 2017, IMTT submitted a revised VRP application and checklist to change the responsible party name to IMTT Epic LLC, effective January 1, 2018. The Corrective Action Plan (CAP) for the Site was submitted to GAEPD, dated May 23, 2018.

The existing monitoring well network at the Site as identified by GHD consists of 61 wells installed during previous environmental investigations that are shown on Figure 3. Historically, as many as 27 of these monitoring wells have contained LNAPL, with 24 wells containing measurable LNAPL during the reporting period.

## 1.2 Conceptual Site Model

A preliminary CSM was submitted as a part of the VIRP. The CSM was updated in the *Corrective Action Plan and Conceptual Site Model* for the Site, dated May 2018, based on information derived from investigations conducted by GHD, review of previous investigative work at the Site, and based on the on-going LNAPL recovery evaluations. The CSM will be updated as needed based on observations from the Site.

## 1.3 Corrective Action Plan

Remedial activities proposed for the Site were outlined in the *Corrective Action Plan and Conceptual Site Model* submitted in May 2018. The corrective actions proposed at the Site include the following:

- Continue long-term LNAPL recovery using in-well air-powered LNAPL skimming systems at well locations AW-9, AW-11, AW-49, AW-56, and AW-82 until stabilized LNAPL transmissivity in the wells decreases to below 0.1 ft<sup>2</sup>/day, which was established as the remedial end-point and de minimis LNAPL transmissivity value.
- Perform 2-month duration intermittent LNAPL recovery from select wells using skimming systems. The wells included in the intermittent skimming program are: AW-5, AW-10, AW-12, AW-22, AW-54, AW-65, and AW-68. Recovery system operation will be limited at these wells due to their typically high initial LNAPL recovery rates and transmissivity values followed by very low recovery rates.
- Continue monitoring wells AW-62 and POD-1 for the presence of LNAPL on the river side of the polywall and use absorbent socks in the wells to remove residual LNAPL.
- Continue quarterly monitoring of all accessible Site monitoring wells to monitor the extent of the LNAPL plume, to verify LNAPL migration is not occurring, and to monitor the integrity of the polywall barrier.
- Implement land use restrictions to prevent exposure to Site contaminants.



## 1.4 Report Overview

This report summarizes the findings from the following activities that were performed at the Site during the reporting period of April 28, 2018 through November 8, 2018:

- Quarterly groundwater monitoring and LNAPL measurements performed in July and October 2018.
- Continuation of long-term LNAPL recovery for monitoring wells AW-9, AW-11, AW-49, AW-56, and AW-82.
- Completion of the first intermittent skimming event for monitoring wells AW-5, AW-10, AW-12, AW-22, AW-54, and AW-68.
- Revised skimming costs and schedules based on updated long-term and intermittent LNAPL removal efforts.

## 2. Monitoring Activities Completed During Reporting Period

### 2.1 Quarterly LNAPL Monitoring

#### 2.1.1 Quarterly July 2018 Gauging Event

Depth to water measurements were obtained on July 5, 2018 for 61 existing on-Site monitoring wells that were located and accessible during the event. The measurements were obtained using a Solinst oil/water interface probe and are summarized in Table 1. Groundwater elevations were determined based on the depth to groundwater measurements compared to surveyed top of casing elevations and adjusted for the measured in-well LNAPL thickness, where required. A groundwater potentiometric elevation and contour map based on the July 5, 2018 groundwater elevation data is shown on Figure 4 and indicates that the groundwater flow direction is generally to the east towards the Savannah River; which is consistent with historical observations.

LNAPL was measured in 23 of 61 gauged wells during the July 2018 event as summarized in Table 1 with observed thicknesses varying between 0.02 feet and 10.32 feet. Figure 5 presents isopleths depicting the measured in-well LNAPL thicknesses for this event which are generally consistent with observations from recent events. No indication of the presence of LNAPL was observed on the river side of the polywall during the July 2018 monitoring.

#### 2.1.2 October 2018 Gauging Event

Depth to water measurements were obtained on October 10, 2018 for 60 existing on-Site monitoring wells that were located and accessible during the event. The measurements were obtained using a Solinst oil/water interface probe and are summarized in Table 1. Groundwater elevations were determined based on the depth to groundwater measurements compared to surveyed top of casing elevations and adjusted for the measured in-well LNAPL thickness, where required. A groundwater potentiometric elevation and contour map based on the October 10, 2018 groundwater elevation data is shown on Figure 6 and indicates that the groundwater flow direction is generally to the east towards the Savannah River; which is consistent with historical observations.



LNAPL was measured in 24 of 61 gauged wells during the October 2018 event as summarized in Table 1 with observed thicknesses varying between 0.01 and 11.27 feet. Figure 7 presents isolopleths depicting the measured in-well LNAPL thicknesses for this event which are generally consistent with observations from recent events. No LNAPL was observed on the river side of the polywall, during the October 2018 event.

#### 2.1.3 LNAPL Extent

Figure 8 depicts the inferred areal extent of LNAPL in the subsurface based on observations of in-well LNAPL accumulations. Included on the figures are the historical maximum extent, the inferred extent in 2009, and the inferred extent based on the October 2018 measurements. Historically, LNAPL has been detected in monitoring wells across the majority of the Site with an inferred extent of over 35 acres. Measurements obtained in 2009 suggested an areal extent of 18 acres. The measurements from October 2018 indicated an extent of approximately 14 acres. Based on these observations, there has been over a 22% reduction in the areal extent since 2009 and an overall reduction of LNAPL extent of over 61%.

Table 4 presents a summary of the maximum in-well LNAPL thickness observed since 2017 for wells that contained LNAPL and the in-well LNAPL thicknesses observed in those wells during the reporting period. The average reduction in the observed in-well LNAPL thicknesses for the reporting period is approximately 30%.

These observations suggest that the LNAPL plume is stable and in a declining condition that supports the conclusion that the LNAPL at the Site is immobile and not likely to migrate nor is it expected to be recoverable to a large extent.

## 2.2 Weekly Polywall Monitoring

No LNAPL has been detected in any of the wells installed on the river side of the polywall since at least 2009, with the exception of AW-62 and POD-1. AW-62 and POD-1 have been monitored weekly since October 2016, and have contained no more than 0.04 feet of LNAPL since that time. This suggests that the majority of the LNAPL mass has been adequately contained by the polywall barrier and that only residual LNAPL remains on the river side of the polywall barrier.

A sheen up to 0.01 feet of LNAPL has been measured in AW-62 and POD-1 intermittently during this reporting period. Absorbent socks have been placed within AW-62 (and POD-1 as a precautionary measure) to recover the residual LNAPL, and have been replaced as needed. GHD will continue to monitor AW-62 and POD-1 which are on the river side of the polywall for the presence of LNAPL. Additionally, all monitoring wells located on the river side of the polywall will continue to be monitored on a quarterly basis to ensure that the integrity of the polywall is maintained and off-Site LNAPL migration is not occurring.

## 2.3 LNAPL Monitoring Observations

As described above, quarterly monitoring was completed in July and October 2018 and the observations suggest the following:

- No additional sources of LNAPL have been observed or identified
- No off-Site migration of LNAPL is occurring



- No indications of any issues or concerns with the integrity of the polywall barrier
- The extent of the LNAPL plume has remained stable and continues to demonstrate an extent less than that observed historically.
- LNAPL migration has not presented an increased risk to human or environmental health

GHD will continue to visit the Site on a quarterly basis to complete measurements of groundwater elevations and in-well LNAPL thickness. The measured LNAPL thicknesses will be reviewed and any wells requiring addition or removal from the LNAPL skimming and transmissivity program will be identified. The quarterly LNAPL gauging information will be utilized to update the CSM to reflect the current extent and in-well thickness trends at the Site.

### 3. Progress of Remedial Activities

As described in prior Progress Reports and the CAP, GHD completed LNAPL recovery evaluations and transmissivity evaluations at each of the on-Site monitoring wells containing LNAPL consistently exceeding 0.3 feet in thickness. The tests were designed to determine the practicability of long-term LNAPL removal using methodologies established in the ITRC Technical/Regulatory Guidance document *Evaluating LNAPL Remedial Technologies for Achieving Project Goals*, dated December 2009. The procedures for data collection, skimmer operation, and the methodology utilized to calculate the LNAPL transmissivity were provided in the CAP.

As described in the CAP, GHD prescribed an LNAPL recovery approach to perform focused LNAPL recovery based on the recoverability of the LNAPL. Five monitoring wells that have demonstrated sustained LNAPL recovery rates over time were identified for continued long-term monitoring until such time as LNAPL recoverability decreased to a de minimis rate. Several other monitoring wells were identified for the performance of periodic or intermittent LNAPL skimming events with a duration of 2 to 3 months. As the skimming events are performed, each well will be evaluated to determine the necessity of continued LNAPL skimming to meet remedial objectives.

Data from long-term and intermittent skimming evaluations was used to develop several graphs to visually depict the skimming results and, if appropriate, depict long-term data trends. The data and applicable graphs for each well are included in Appendices A and B for the long-term and intermittent wells, respectively, and a description of each graph is provided below:

- The first graph for each well presents a depiction of the cumulative LNAPL recovery volume (gallons) and the weekly LNAPL recovery rate over time (gallons/day) during the long-term evaluation period. The cumulative volume of LNAPL recovery should become asymptotic with time. Typically, as the volume of LNAPL recovered from a well increases over time, the LNAPL recovery rate will decrease (i.e. LNAPL volumetric recovery decline). This is due to the removal of the recoverable/mobile portion of LNAPL from the subsurface in the vicinity of the well.
- The second graph for each well presents an analysis of the LNAPL volumetric recoverability ( $Q_n$ ) over time. Once stabilization of LNAPL recovery is reached (i.e., the in-well LNAPL has been drawn down and the skimmer is operating continuously during the observation interval), plotting the LNAPL recoverability versus the cumulative LNAPL volume recovered can be used to determine an estimate of the total volume of recoverable LNAPL from the well. When a clear



trend is identified based on the data collected, the value of the estimated recoverable volume is shown on the graph.

- The third graph for each well presents an analysis of the weekly LNAPL transmissivity ( $T_n$ ) values compared to total volumetric recovery and, where appropriate, a  $T_n$  decline curve. The plot presents the estimated LNAPL  $T_n$  values following stabilization of LNAPL recovery rates as compared to the ITRC de minimis criteria of 0.1 and 0.8 ft<sup>2</sup>/day.

As discussed in the CAP, an assessment of the cost of current and future LNAPL removal on a per-gallon basis was performed for each of the wells which underwent LNAPL recoverability and transmissivity evaluations. The following sections provide an updated analysis for the long-term and intermittent LNAPL skimming wells.

### 3.1 Long-Term Skimming Wells Progress Update

#### 3.1.1 LNAPL Recovery from Long-Term Skimming Wells

As described in the CAP, monitoring wells AW-9, AW-11, AW-49, AW-56, and AW-82 were identified as candidate wells for long-term LNAPL skimming due to sustainable LNAPL recovery rates. Based on the LNAPL recovery rates and transmissivity data, long-term skimming was continued on these wells during the reporting period.

As described in the CAP, an estimation of the completion date and remaining volume of LNAPL to be removed at each well can be made using the data obtained from the long-term skimming evaluations. Decreasing trends in the stabilized LNAPL recovery rate at each candidate well were used to determine an approximate operational time remaining and volume of mobile LNAPL to be removed in order for the transmissivity of the well to decrease to the 0.1 ft<sup>2</sup>/day de minimis criteria. The estimated completion dates and remaining LNAPL volume to be removed for each of the long-term skimming wells are given below:

Well ID	Total LNAPL Removal as of November 8, 2018 (gallons)	LNAPL de Minimis Recovery Rate (gallons/day)	Approximate LNAPL Volume Removed at de Minimis LNAPL Recovery Rate (gallons)	Estimated Date for Long-Term Skimming Completion
AW-9	1,655	0.5824	2,270	July 2019
AW-11	1,280	0.5007	1,305	December 2018
AW-49	2,575	0.5109	2,750	March 2019
AW-56	1,836	0.8176	3,070	May 2020
AW-82	1,315	0.4291	1,335	January 2019

When compared to the estimated completion dates provided in the Fifth Semi-Annual VRP Progress Report, there has been an extension in the estimated completion dates for AW-11 (6 months) and AW-56 (9 months) while those for AW-9, AW-49, and AW-82 remained generally consistent.

LNAPL removal data will continue to be collected during weekly O&M visits to the Site, and the above projections may be altered as additional data becomes available. The above estimated dates and volumes of LNAPL remaining are inferred based on projecting the existing data trends and should not be viewed as remedial end points. Updated projections will be provided in future Semi-Annual VRP Progress Reports.



### 3.1.2 Estimated LNAPL Recovery Cost at the Long-Term Wells

The table below provides an indication of the trend in costs to continue long-term skimming at the five wells. The first column presents the approximate cost per gallon of LNAPL recovered since skimming began. The second column presents the calculated cost per gallon during the reporting period and the final column is the estimated cost per gallon when the de minimis LNAPL recovery rate is reached for a given well:

Well ID	Estimated Unit Cost for Long-Term Skimming Completed to Date (\$/gallon)	Estimated Unit Cost over the Reporting Period (\$/gallon)	Estimated Unit Cost at Transmissivity Endpoint (\$/gallon)
AW-9	\$15	\$40	\$68
AW-11	\$15	\$33	\$80
AW-49	\$10	\$22	\$78
AW-56	\$13	\$14	\$49
AW-82	\$15	\$78	\$93

The table shows that over the long-term, the LNAPL recovery costs have been less than \$15/gallon; however, during the reporting period, the unit costs increased substantially for wells AW-9, AW-11, and AW-82. As shown, the unit cost for well AW-82 is approaching the cost at the de minimis LNAPL recovery rate which suggests that long-term skimming is becoming cost prohibitive to remove residual LNAPL.

### 3.1.3 Summary of Observations for Long-Term Skimming Wells

Based on the observations from the reporting period, the following is a summary of the observations, findings, and potential changes to the skimming program for the long-term skimming wells:

- LNAPL recovery rates remained stable in AW-9, AW-49, and AW-56 during the reporting period suggesting that long-term skimming is still appropriate.
- The unit costs for LNAPL recovery during the reporting period increased for all wells, with the exception of AW-56. This indicates that the volume of recoverable LNAPL near AW-9, AW-11, AW-49, and AW-82 is decreasing as expected.
- The unit cost for LNAPL recovery from AW-82 is nearing the cost at the de minimis LNAPL recovery rate, suggesting that continued long-term skimming is not warranted.
- During the next reporting period, long-term skimming will likely be halted in AW-11 and AW-82. It is anticipated that these wells will be allowed to recover and then intermittent skimming events will begin.

## 3.2 Intermittent Skimming Wells Progress Update

As described in the CAP, monitoring wells AW-5, AW-10, AW-12, AW-22, AW-54, AW-65, and AW-68 were identified as candidate wells for intermittent LNAPL skimming due to high in-well LNAPL thicknesses and unsustainable long-term LNAPL recovery rates. Monitoring well AW-15 will also be entered into the intermittent skimming program. During the reporting period, the first intermittent skimming events for AS-5, AW-10, AW-12, AW-22, AW-54, and AW-68 were completed and the second intermittent event was initiated for AW-10. Skimming systems were continuously



operated in each of the intermittent wells on a rotating basis for between 2 and 3 months. The results of the intermittent skimming operations are discussed below.

### 3.2.1 LNAPL Recovery from Intermittent Skimming Wells

A summary of the intermittent skimming results completed during the reporting period is presented in the table below:

Well ID	1 <sup>st</sup> Intermittent Event			
	Estimated LNAPL Recovery (gallons)	Estimated Unit Cost (\$/gallon)	Actual LNAPL Recovery (gallons)	Actual Unit Cost of Removal (\$/gallon)
AW-5	60	\$40	3	\$547
AW-10	80	\$30	75	\$44
AW-12	80	\$30	84	\$29
AW-22	40	\$60	47.3	\$58
AW-54	50	\$48	21	\$182
AW-65	50	\$48	Not Yet Completed	
AW-68	150	\$16	13.8	\$174

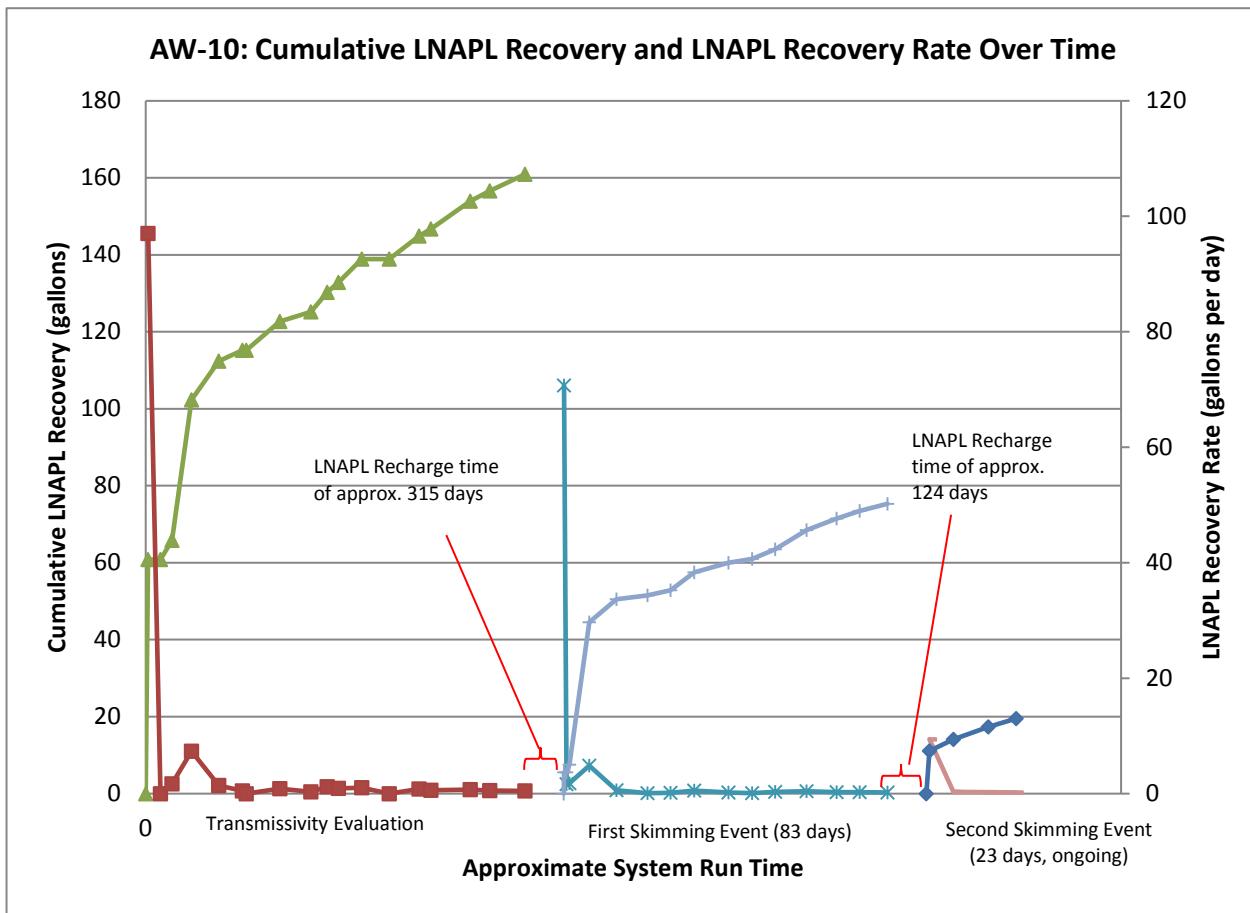
In the CAP, estimated LNAPL recovery volumes and associated unit costs were developed based on previous observations at each well and those values are presented in columns 2 and 3 of the table above. These estimates were intended to assist with the evaluation of actual results and determine if additional intermittent events are warranted or if further LNAPL recovery is impracticable. Columns 4 and 5 show the actual recovery volumes and associated cost of removal. As shown above, the results indicate that LNAPL recovery was as expected at AW-10, AW-12, and AW-22 but much less than expected at AW-5, AW-54, at AW-68.

Additionally, during each of the intermittent events, the majority of the recovered LNAPL occurred during the initial two weeks of the event as shown below. This is consistent with previous observations at these wells as they yield high LNAPL recovery initially (typically because there are high in-well LNAPL thicknesses present), but sustained LNAPL recovery from these wells is not possible for long durations. This is indicative of low overall LNAPL recoverability:

Well ID	1 <sup>st</sup> Intermittent Event		
	Event Duration (days)	LNAPL Recovery during Weeks 1 & 2 (gallons)	LNAPL Recovery during Remainder of Event (gallons)
AW-5	41	3	0
AW-10	83	44.5	30
AW-22	68	30	17.3
AW-54	96	13.5	7.5
AW-68	60	4.1	9.7

At AW-10, the second intermittent skimming event has been initiated. As with the first intermittent event, the bulk of LNAPL recovery has occurred during the initial portion of the test. Through November 8, 2018, 19.5 gallons of LNAPL had been recovered since October 16, 2018 (23 days) and 11.1 gallons was recovered in the first day as the near well LNAPL was removed. This observation is consistent with observations from the previous skimming events conducted at AW-10.

The below chart that is also included in Appendix B, demonstrates that the volume of recoverable LNAPL decreases with each successive event and the recovery rate is low and not sustainable:



In-well LNAPL thicknesses of over 10 feet continue to be observed in AW-54, yet as evidenced by the multiple skimming events sustained LNAPL recovery does not occur. This suggests that even though there is LNAPL present in the subsurface near AW-54, it is not sufficiently recoverable to justify continued recovery.

### 3.2.2 Estimated LNAPL Recovery Cost at the Intermittent Skimming Wells

As shown in the first table of Section 3.2.1, unit costs for the skimming operation were determined for the initial skimming events. The unit costs per gallon of LNAPL recovered were as anticipated for AW-10, AW-12, and AW-22 but those for AW-5, AW-54, and AW-68 were very high due to low LNAPL recovery. Additionally, for the majority of the intermittent skimming wells, high LNAPL recovery was observed during the first week or two of skimming. Therefore, the majority of the cost to recover LNAPL was over the subsequent duration of the events when low volumes of LNAPL were recovered. Based on these observations, further LNAPL recovery over durations of more than a week are not practicable at AW-5, AW-54, and AW-68, and periodic LNAPL recovery while removing a small volume of LNAPL, would not result in a large-scale effect on the overall extent of the LNAPL plume at the Site.



The cost analysis for the remaining intermittent wells will continue to be evaluated and will be updated in each subsequent Semi-Annual VRP Progress Report to reflect the observed decline in LNAPL recovery. If changes in the LNAPL recovery rates significantly differ from the projected trends, then technically practicable LNAPL recovery may or may not be warranted at any of the above wells, and the skimming schedule may be altered to add, remove, or extend skimming operations.

### 3.2.3 Summary of Observations for Intermittent Skimming Wells

Based on the observations from the reporting period, the following is a summary of the observations, findings, and potential changes to the skimming program for the intermittent skimming wells:

- As with previous observations at these wells, LNAPL recovery rates are typically higher during the initial week or two of the event and LNAPL recovery rates quickly decrease over time
- During the initial intermittent skimming events, the LNAPL recovery volumes and unit costs for LNAPL recovery from AW-10, AW-12, and AW-22 were observed at the rates and costs generally expected and as anticipated in the CAP. Further intermittent skimming events will be completed at these wells to continue to monitor and document the decreasing LNAPL recovery trends expected over time.
- Limited LNAPL recovery was observed at AW-5, AW-54, and AW-68 during the initial intermittent events. The observations indicate that additional LNAPL recovery through intermittent skimming events are not technically practicable.
- LNAPL continues to re-accumulate in AW-54 following the completion of skimming events at in-well thicknesses of over 10 feet; however, upon the initiation of skimming, the LNAPL is quickly removed and very low LNAPL recovery rates are observed.

## 3.3 Progress Towards Achieving Remedial Endpoints

Proposed remedial endpoints for the ongoing LNAPL recovery were provided in the CAP. A summary of the progress towards achieving the remedial endpoints is provided below.

- Approximately 1,590 gallons of LNAPL were recovered from wells at the Site during the reporting period with over 11,680 gallons recovered since skimming operations began in the Spring of 2016.
- The extent of the LNAPL plume continues to remain stable with no indications of additional sources or migration of LNAPL.
- The monitoring performed on the river-side of the polywall barrier continues to indicate that there are no apparent concerns with the integrity of the polywall barrier.
- LNAPL recovery from AW-56 has remained consistent throughout the reporting period and will therefore likely be subjected to long-term skimming for the foreseeable future.
- Wells AW-9 and AW-49 have showed decreasing LNAPL recovery rates, but do not yet appear to be candidates for transition to the intermittent skimming program.
- LNAPL recovery rates have decreased in wells AW-11 and AW-82 such that it is anticipated that long-term skimming will be halted at these locations during the next reporting period. The LNAPL recovery rates are becoming asymptotic at values at or below the expected de minimis



LNAPL recovery rates. After a period of stabilization (approximately 3 months), skimming will be resumed to gauge the LNAPL recovery rate and determine if intermittent skimming is appropriate at these locations.

- Because minimal LNAPL recovery was observed during the intermittent skimming events completed at AW-5 and AW-68, these wells have been removed from the group of intermittent skimming wells going forward.
- Even though in-well LNAPL thicknesses of over 10 feet are observed in AW-54 when skimming is not underway, the implementation of periodic skimming events has not resulted in the recovery of large volumes of LNAPL. Typically, over 50% of the LNAPL recovery during a 2 to 3 month duration skimming event occurs within the first week or two when near well LNAPL is recovered. The LNAPL recovery rate then quickly diminishes and limited volumes of LNAPL are subsequently recovered. Based on these repeated observations at AW-54, this well has been removed from the group of intermittent skimming wells going forward.
- As discussed in Section 3.2.1, review of the chart in Appendix B that depicts the cumulative LNAPL recovery volume and LNAPL recovery rate for AW-10 over the course of the initial transmissivity evaluation, the first intermittent skimming event, and the second intermittent skimming event (underway) demonstrates that LNAPL recoverability at this location has decreased with each successive event. This supports the assertion that upon the completion of intermittent events and the demonstrated reduction in recoverable LNAPL with each event, additional LNAPL recovery at this well, and other wells at the Site that demonstrate similar trends, is not warranted.

### 3.4 Summary of LNAPL Skimming Program for the Next Reporting Period

Below is a summary of the anticipated skimming program to be implemented during the next reporting period:

- Long-Term Skimming
  - AW-9
  - AW-11 (expected to transition to intermittent program)
  - AW-49
  - AW-56
  - AW-82 (expected to transition to intermittent program)
- Intermittent Skimming
  - AW-10
  - AW-12
  - AW-15
  - AW-22
  - AW-65



- Removed from Skimming Program with Future Monitoring Only
  - AW-5
  - AW-54
  - AW-68

## 4. Commitment to Future Requirements

IMTT affirms its commitment to the following future requirements:

- Progress Reports – June 1<sup>st</sup> and December 1<sup>st</sup> through 2020
- March 31, 2021 – submit CSR upon completion of remedial activities proposed herein

## 5. Project Schedule

The anticipated milestone schedule for the May 1, 2018 to November 1, 2018 reporting period is provided in Table 3. Long-term skimming will continue to be performed at AW-9, AW-11, AW-49, AW-56, and AW-82 during the next reporting period. However, it is anticipated that wells AW-11 and AW-82 will be transitioned in the near future to the intermittent skimming program based on declining LNAPL recovery rates. Intermittent skimming events will continue to be performed and will be evaluated to determine additional skimming needs.

## 6. Engineering Labor Hours

Appendix B includes the summary of labor hours incurred by this project from May 1, 2018 to October 31, 2018



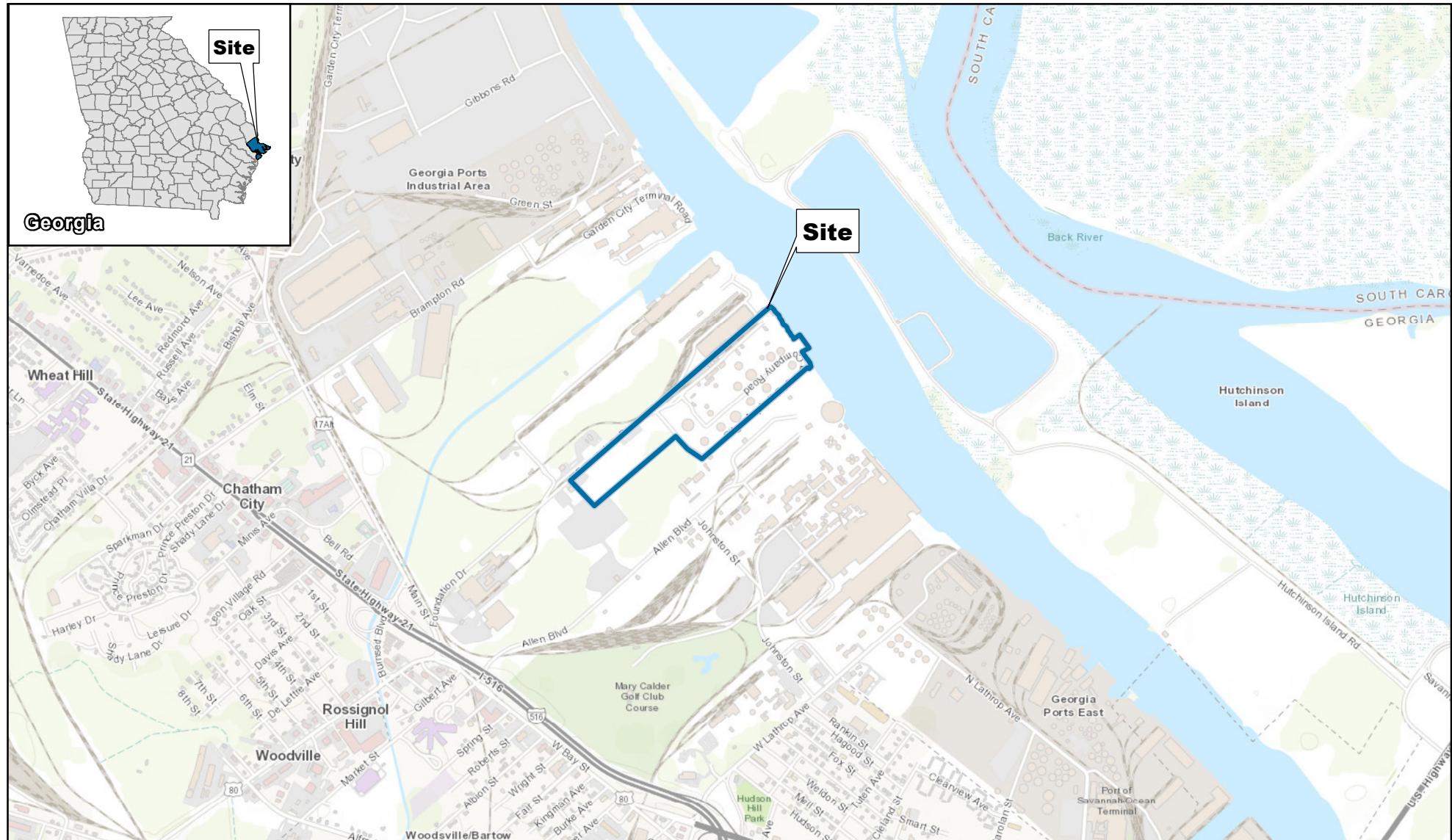
# about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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678.280.2121

[www.ghd.com](http://www.ghd.com)

# Figures



Source: ESRI World Topographic Map.

0 1,000 2,000  
Feet

Coordinate System:  
NAD 1983 UTM Zone 17N



### IMTT SAVANNAH NORTH TERMINAL 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

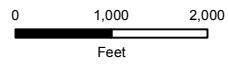
#### VICINITY MAP

089400  
Oct 18, 2018

**FIGURE 1**



Source: Aerial Photograph provided by Epic Midstream, LLC on March 17, 2016.



Coordinate System:  
NAD 1983 UTM Zone 15N



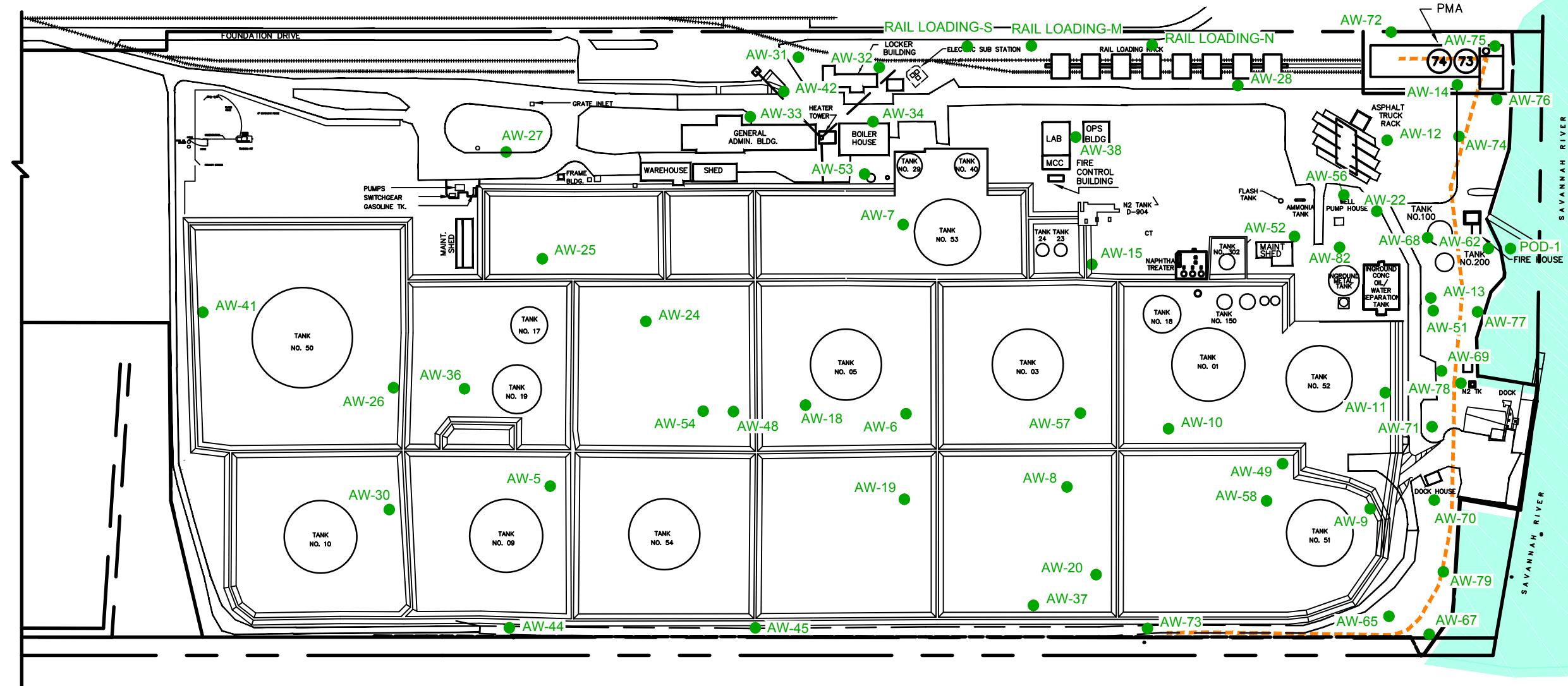
IMTT SAVANNAH NORTH TERMINAL  
7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

089400  
Oct 18, 2018

2016 AERIAL PHOTOGRAPH

FIGURE 2

PLANT NORTH



LEGEND

- PROPERTY LINE AND BOUNDARY
- - - POLYWALL BARRIER
- AW-52 • WELL LOCATION

0 100 200ft

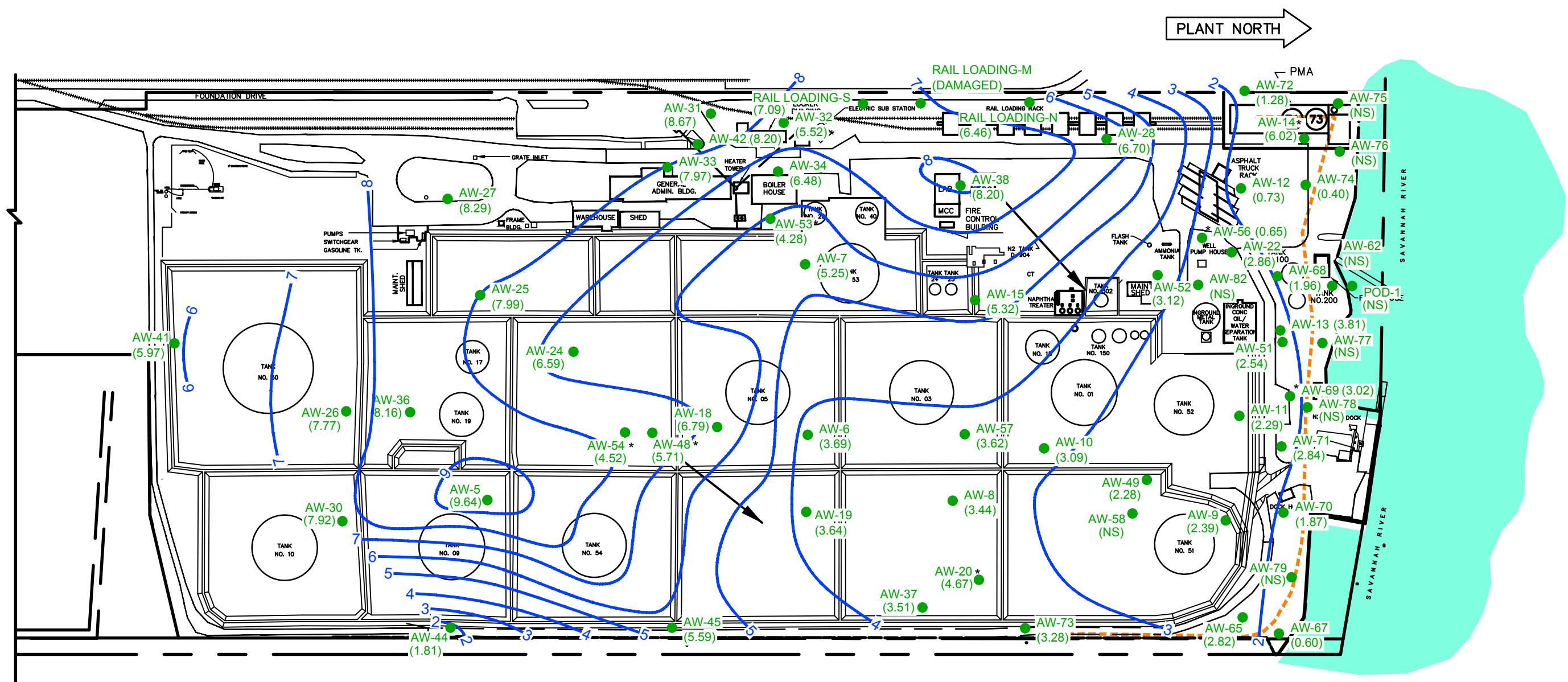


IMTT SAVANNAH NORTH TERMINAL  
7 FOUNDATION DRIVE, SAVANNAH, GEORGIA  
SIXTH SEMI-ANNUAL VRP PROGRESS REPORT

089400-2018  
Nov 15, 2018

SITE PLAN

FIGURE 3



#### LEGEND

- PROPERTY LINE AND BOUNDARY
- POLYWALL BARRIER
- WELL LOCATION  
AW-52 (8.20)
- GROUNDWATER ELEVATION (FT AMSL)
- GROUNDWATER ELEVATION CONTOUR (FT AMSL)  
8
- GROUNDWATER FLOW DIRECTION
- NS NOT SURVEYED
- NM NOT MEASURED
- \* MEASURED ELEVATION NOT USED TO DEVELOP CONTOURS

0 100 200ft

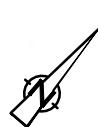
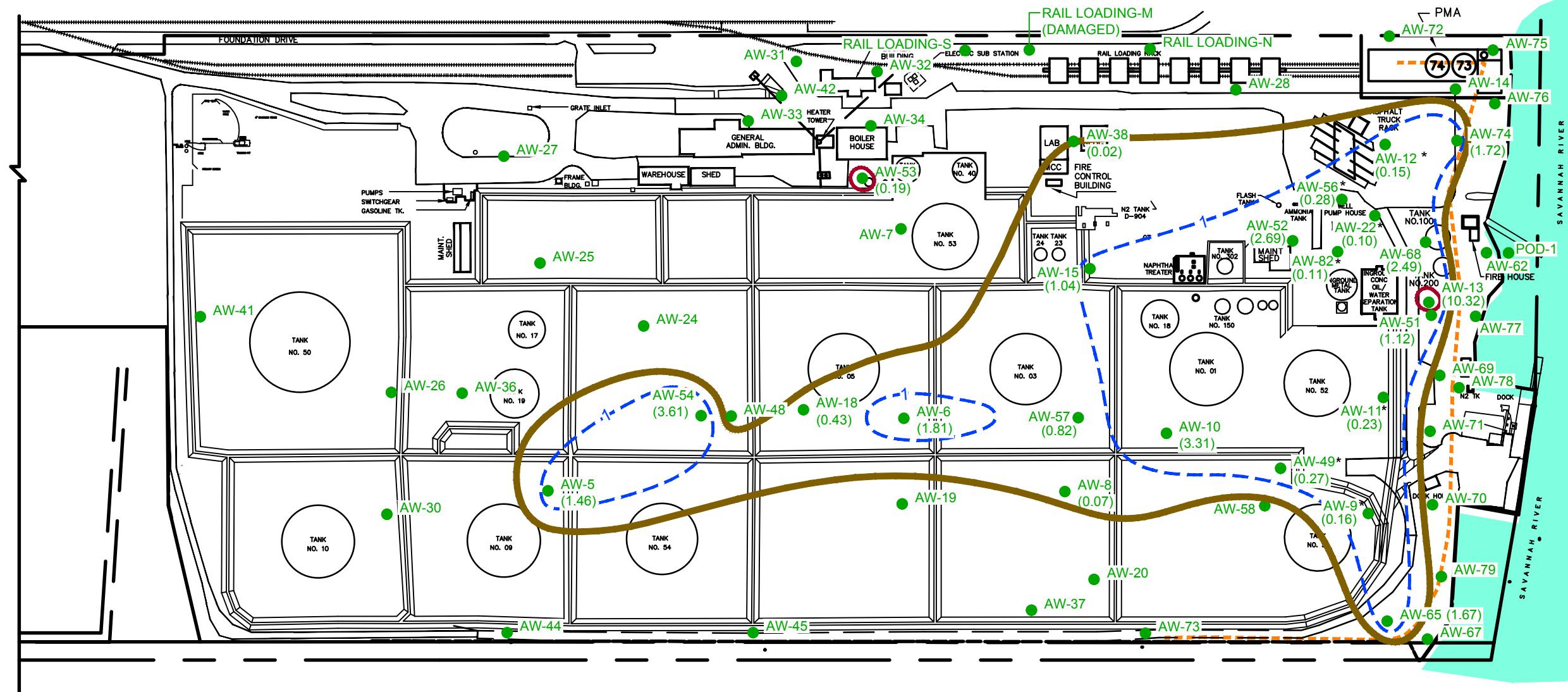


IMTT SAVANNAH NORTH TERMINAL  
7 FOUNDATION DRIVE, SAVANNAH, CHATHAM COUNTY, GEORGIA  
SIXTH SEMI-ANNUAL VRP PROGRESS REPORT  
JULY 2018 GROUNDWATER ELEVATION  
CONTOUR MAP

089400-2018  
Nov 15, 2018

FIGURE 4

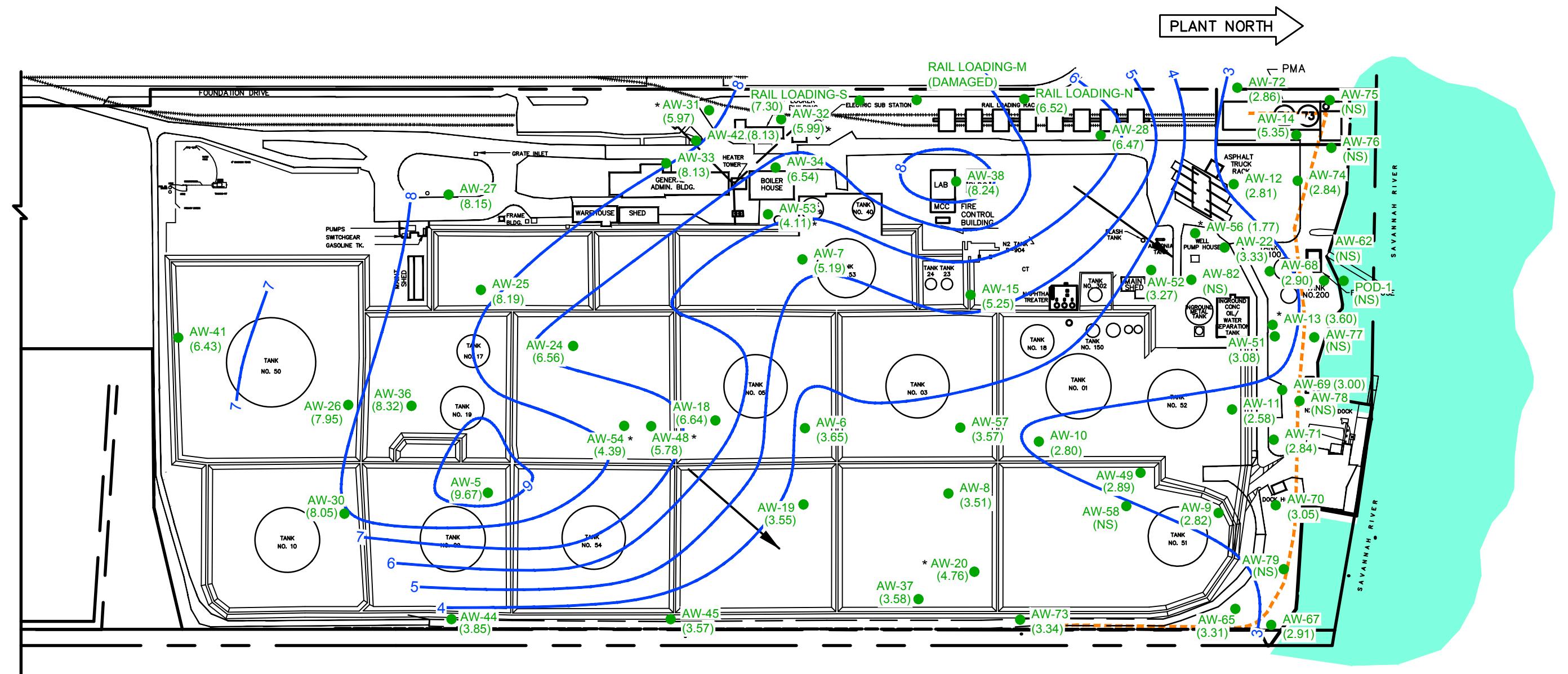
PLANT NORTH



IMTT SAVANNAH NORTH TERMINAL  
7 FOUNDATION DRIVE, SAVANNAH, CHATHAM COUNTY, GEORGIA  
SIXTH SEMI-ANNUAL VRP PROGRESS REPORT

089400-2018  
Nov 15, 2018

JULY 2018 LNAPL ISOCONTOUR MAP



LEGEND

- — — PROPERTY LINE AND BOUNDARY
  - - - POLYWALL BARRIER
  - AW-52 ● WELL LOCATION
  - (8.15) GROUNDWATER ELEVATION (FT AMSL)
  - 7 GROUNDWATER ELEVATION CONTOUR (FT AMSL)
  - GROUNDWATER FLOW DIRECTION
  - NS NOT SURVEYED
  - NM NOT MEASURED
  - \* MEASURED ELEVATION NOT USED TO DEVELOP CONTOUR

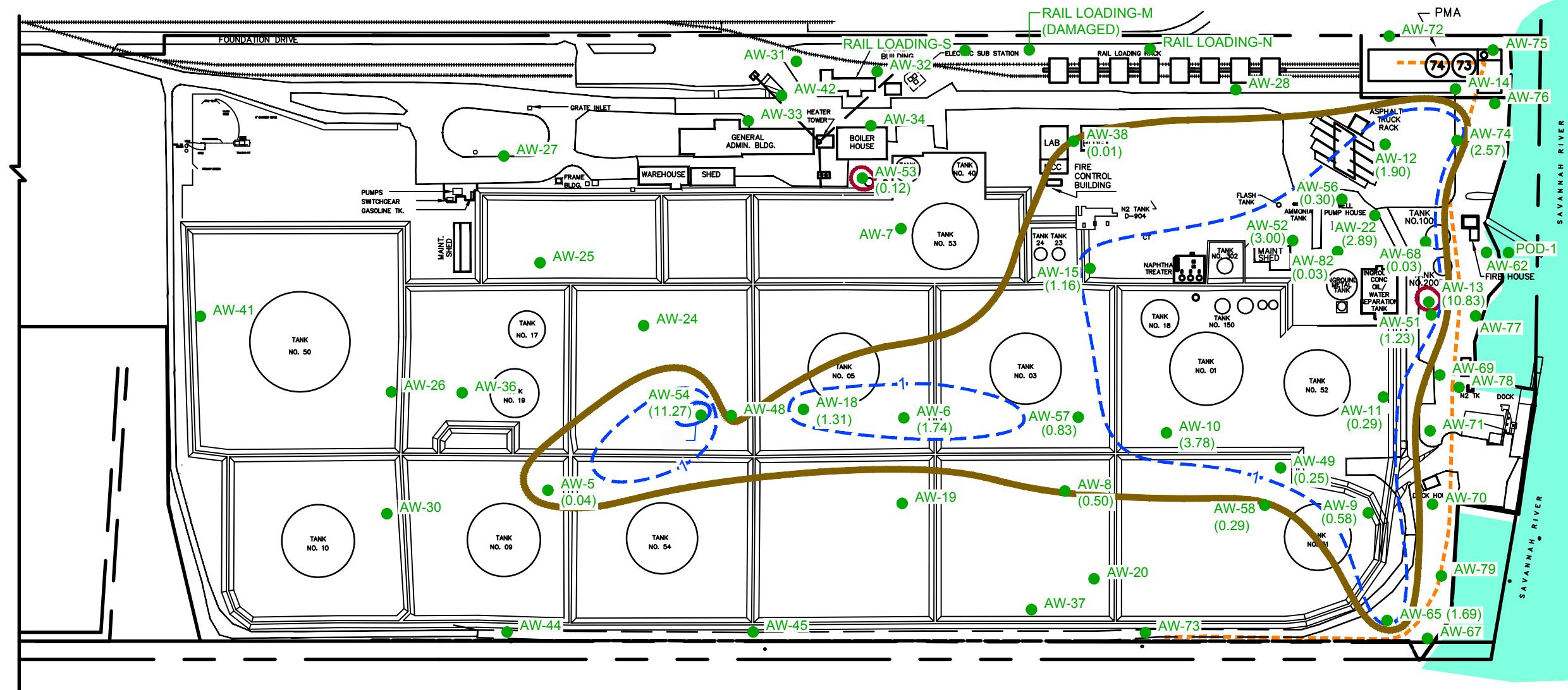


IMTT SAVANNAH NORTH TERMINAL  
7 FOUNDATION DRIVE, SAVANNAH, CHATHAM COUNTY, GEORGIA  
SIXTH SEMI-ANNUAL VRP PROGRESS REPORT  
OCTOBER 2018 GROUNDWATER ELEVATION  
CONTOUR MAP

089400-2018  
Nov 15, 2018

## FIGURE 6

PLANT NORTH



LEGEND

- PROPERTY LINE AND BOUNDARY
- POLYWALL BARRIER
- AW-52 (3.61) WELL LOCATION
- (LNAPL THICKNESS (FEET))
- LNAPL THICKNESS ISOPLETH (FEET)
- HEAVIER LNAPL
- \* ACTIVE REMOVAL SYSTEM
- OCTOBER 2018 INFERRRED EXTENT OF LNAPL

0 100 200ft

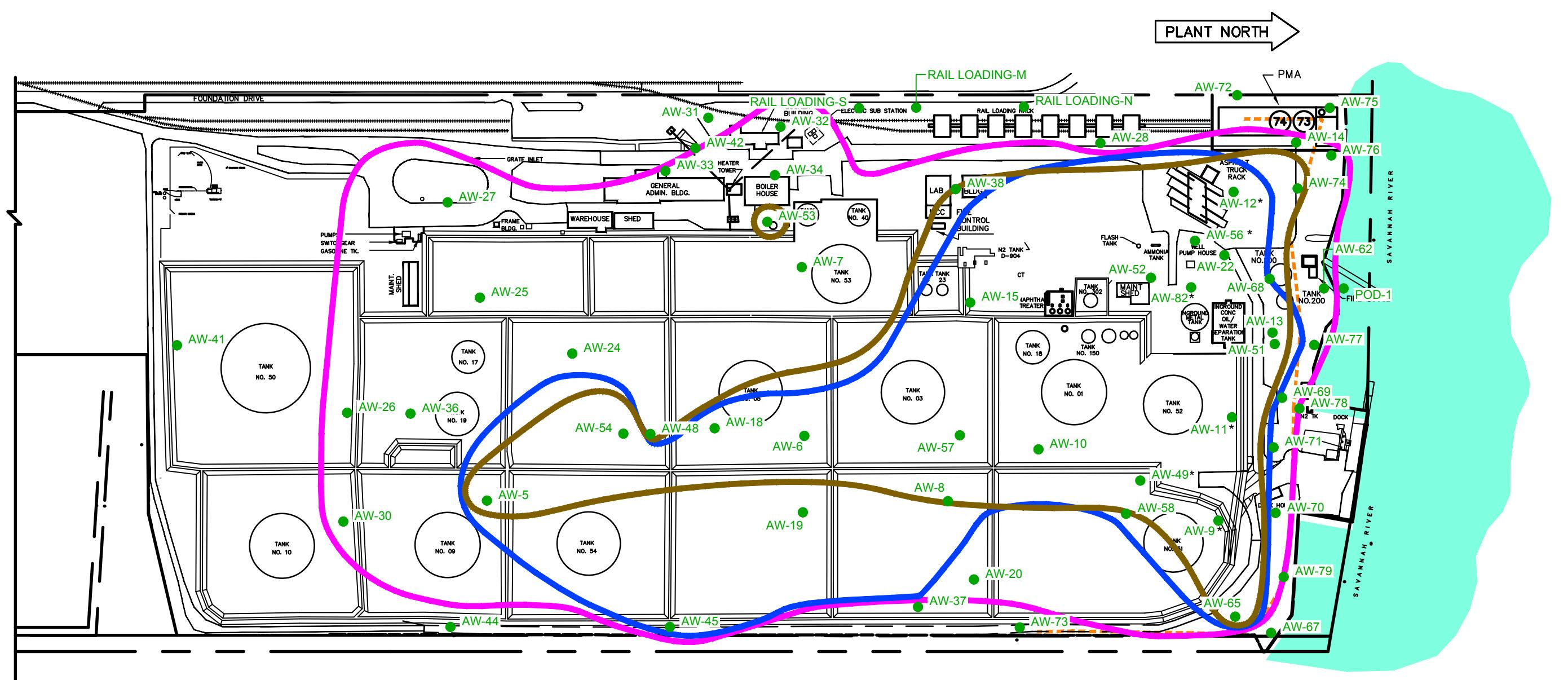


IMTT SAVANNAH NORTH TERMINAL  
7 FOUNDATION DRIVE, SAVANNAH, CHATHAM COUNTY, GEORGIA  
SIXTH SEMI-ANNUAL VRP PROGRESS REPORT

089400-2018  
Nov 15, 2018

OCTOBER 2018 LNAPL ISOCONTOUR MAP

FIGURE 7



0 100 200ft



IMTT SAVANNAH NORTH TERMINAL  
7 FOUNDATION DRIVE, SAVANNAH, CHATHAM COUNTY, GEORGIA  
SIXTH SEMI-ANNUAL VRP PROGRESS REPORT

089400-2018  
Nov 15, 2018

INFERRED EXTENT OF LNAPL

FIGURE 8

# Tables

Table 1

Page 1 of 13

**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-5	3/1/2016	6.56	7.75	9.31	1.19
	5/1/2016	6.42	7.61	9.45	1.19
	9/21/2016	5.50	8.05	10.17	2.55
	11/15/2016	6.72	8.32	9.09	1.60
	2/14/2017	5.35	6.42	10.53	1.07
	5/2/2017	7.23	7.62	8.75	0.39
	8/8/2017	5.11	6.81	10.68	1.70
	11/1/2017	6.61	7.81	9.25	1.20
	2/6/2018	6.78	7.98	9.08	1.20
	5/3/2018	6.97	8.26	8.88	1.29
	7/5/2018	6.19	7.65	9.64	1.46
	10/16/2018	6.36	6.40	9.67	0.04
AW-6	3/1/2016	8.20	9.43	3.19	1.23
	5/1/2016	8.06	9.58	3.29	1.52
	9/22/2016	7.46	9.37	3.83	1.91
	11/15/2016	7.25	9.54	3.99	2.29
	2/14/2017	7.91	9.53	3.42	1.62
	5/2/2017	8.36	9.64	3.02	1.28
	8/8/2017	7.70	7.81	3.85	0.11
	11/1/2017	7.90	9.31	3.46	1.41
	2/6/2018	8.37	9.36	3.06	0.99
	5/3/2018	8.16	9.49	3.22	1.33
	7/5/2018	7.62	9.43	3.69	1.81
	10/16/2018	7.67	9.41	3.65	1.74
AW-7	3/1/2016	--	7.93	4.61	--
	5/1/2016	--	7.78	4.76	--
	9/22/2016	--	7.22	5.32	--
	11/15/2016	--	6.38	6.16	--
	2/14/2017			Not Measured	
	5/2/2017	--	8.11	4.43	--
	8/8/2017	--	6.86	5.68	--
	11/1/2017	--	7.64	4.90	--
	2/6/2018	--	7.87	4.67	--
	5/3/2018	--	7.75	4.79	--
	7/5/2018	--	7.29	5.25	--
	10/16/2018	--	7.35	5.19	--
AW-8	3/1/2016	--	12.70	2.98	--
	5/1/2016	12.54	12.70	3.12	0.16
	9/22/2016	12.20	12.25	3.47	0.05
	11/15/2016	11.80	11.82	3.88	0.02
	2/14/2017	12.36	12.40	3.31	0.04
	5/2/2017	12.99	13.01	2.69	0.02
	8/8/2017	11.88	11.93	3.79	0.05
	11/1/2017	12.41	12.43	3.27	0.02
	2/6/2018	--	12.77	2.91	--
	5/3/2018	12.63	12.65	3.05	0.02
	7/5/2018	12.23	12.30	3.44	0.07
	10/16/2018	12.10	12.60	3.51	0.50
AW-9	3/1/2016	10.89	14.82	2.04	3.93
	5/1/2016	10.77	14.62	2.17	3.85
	9/22/2016	11.15	11.40	2.31	0.25
	11/15/2016	10.31	13.20	2.77	2.89
	2/14/2017	10.92	11.24	2.53	0.32
	5/2/2017	11.74	11.85	1.74	0.11
	8/8/2017	10.35	10.45	3.14	0.10
	11/1/2017	11.18	11.30	2.30	0.12
	2/6/2018	11.34	11.75	2.10	0.41
	5/3/2018	10.83	13.30	2.31	2.47
	7/5/2018	11.09	11.25	2.39	0.16
	10/16/2018	10.60	11.18	2.82	0.58

Table 1

Page 2 of 13

**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-10	3/1/2016	11.10	14.72	2.27	3.62
	5/1/2016	10.73	14.82	2.57	4.09
	9/22/2016	10.44	15.33	2.75	4.89
	11/15/2016	9.40	14.12	3.82	4.73
	2/14/2017	11.31	11.56	2.55	0.25
	5/2/2017	11.73	13.08	1.97	1.35
	8/8/2017	9.90	13.79	3.43	3.89
	11/1/2017	10.84	14.75	2.49	3.91
	2/6/2018	11.31	13.82	2.22	2.51
	5/3/2018	11.60	11.88	2.26	0.28
	7/5/2018	10.33	13.64	3.09	3.31
	10/16/2018	10.55	14.33	2.80	3.78
AW-11	3/1/2016	11.20	14.79	1.92	3.59
	5/1/2016	10.86	14.92	2.19	4.06
	9/22/2016	10.77	14.17	2.37	3.40
	11/15/2016	10.18	12.68	3.10	2.50
	2/14/2017	11.26	11.49	2.35	0.23
	5/2/2017	12.25	13.39	1.22	1.14
	8/8/2017	10.61	10.81	3.00	0.20
	11/1/2017	11.46	11.61	2.16	0.15
	2/6/2018	11.80	12.11	1.79	0.31
	5/3/2018	11.65	11.95	1.95	0.30
	7/5/2018	11.32	11.55	2.29	0.23
	10/16/2018	11.02	11.31	2.58	0.29
AW-12	3/1/2016	9.25	12.65	2.30	3.40
	5/1/2016	8.96	15.77	2.01	6.81
	9/21/2016	5.47	16.20	4.82	10.73
	11/15/2016	8.70	10.99	3.04	2.29
	2/14/2017	9.46	14.09	1.88	4.63
	5/2/2017	9.50	15.15	1.67	5.65
	8/8/2017	8.40	17.04	2.25	8.64
	11/1/2017	9.06	16.61	1.78	7.55
	2/6/2018	12.17	12.20	-0.04	0.03
	5/3/2018	9.68	11.73	2.11	2.05
	7/5/2018	11.38	11.53	0.73	0.15
	10/16/2018	9.00	10.90	2.81	1.90
AW-13	3/1/2016	10.40	17.70	2.99	7.30
	5/1/2016	9.95	18.64	3.56	8.69
	9/22/2016	10.20	16.45	3.11	6.25
	11/15/2016	9.11	14.15	4.10	5.04
	2/14/2017	9.66	17.22	3.75	7.56
	5/2/2017	10.67	18.28	2.75	7.61
	8/8/2017	9.01	19.15	4.62	10.14
	11/1/2017	9.92	19.04	3.62	9.12
	2/6/2018	10.08	19.36	3.48	9.28
	5/3/2018	10.21	19.65	3.36	9.44
	7/5/2018	9.83	20.15	3.81	10.32
	10/17/2018	10.08	20.91	3.60	10.83
AW-14	3/1/2016	--	8.52	4.99	--
	5/1/2016			Not Measured	
	9/22/2016	--	8.05	5.46	--
	11/15/2016	--	7.46	6.05	--
	2/14/2017	--	8.66	4.85	--
	5/2/2017	--	8.19	5.32	--
	8/8/2017	--	8.09	5.42	--
	11/1/2017	--	8.45	5.06	--
	2/6/2018	--	8.81	4.70	--
	5/3/2018	--	8.41	5.10	--
	7/5/2018	--	7.49	6.02	--
	10/16/2018	--	8.16	5.35	--

Table 1

Page 3 of 13

**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-15	3/1/2016	10.65	10.75	4.72	0.10
	5/1/2016	9.40	9.66	5.94	0.26
	9/22/2016	9.25	10.31	5.98	1.06
	11/15/2016	9.48	10.46	5.76	0.98
	2/14/2017	9.91	11.12	5.29	1.21
	5/2/2017	10.75	11.94	4.46	1.19
	8/8/2017	9.30	10.26	5.94	0.96
	11/1/2017	10.18	11.26	5.04	1.08
	2/6/2018	10.57	11.56	4.67	0.99
	5/3/2018	10.50	11.52	4.73	1.02
	7/5/2018	9.91	10.95	5.32	1.04
	10/16/2018	9.96	11.12	5.25	1.16
AW-18	3/1/2016	7.06	8.60	5.64	1.54
	5/1/2016	7.00	8.75	5.66	1.75
	9/22/2016	6.70	9.45	5.82	2.75
	11/15/2016	6.29	7.74	6.42	1.45
	2/14/2017	6.09	7.31	6.65	1.22
	5/2/2017	6.95	7.80	5.85	0.85
	8/8/2017	6.16	6.40	6.72	0.24
	11/1/2017	6.87	8.52	5.81	1.65
	2/6/2018	6.64	7.28	6.19	0.64
	5/3/2018	6.65	7.52	6.14	0.87
	7/5/2018	6.07	6.50	6.79	0.43
	10/16/2018	6.09	7.40	6.64	1.31
AW-19	3/1/2016	12.40	12.45	3.09	0.05
	5/1/2016	--	12.26	3.24	--
	9/22/2016	11.97	11.99	3.53	0.02
	11/15/2016	--	11.60	3.90	--
	2/14/2017	--	12.11	3.39	--
	5/2/2017	--	12.50	3.00	--
	8/8/2017	--	11.51	3.99	--
	11/1/2017	--	12.13	3.37	--
	2/6/2018	--	12.41	3.09	--
	5/3/2018	--	12.32	3.18	--
	7/5/2018	--	11.86	3.64	--
	10/16/2018	--	11.95	3.55	--
AW-20	3/1/2016	--	12.20	3.47	--
	5/1/2016	--	12.06	3.61	--
	9/22/2016	--	11.16	4.51	--
	11/15/2016	--	11.04	4.63	--
	2/14/2017	--	11.80	3.87	--
	5/2/2017	--	12.58	3.09	--
	8/8/2017	--	9.96	5.71	--
	11/1/2017	--	11.35	4.32	--
	2/6/2018	--	12.28	3.39	--
	5/3/2018	--	12.05	3.62	--
	7/5/2018	--	11.00	4.67	--
	10/16/2018	--	10.91	4.76	--
AW-22	3/1/2016	12.65	17.72	1.74	5.07
	5/1/2016	12.75	16.42	1.84	3.67
	9/21/2016	11.20	15.75	3.27	4.55
	11/15/2016	11.93	11.95	3.20	0.02
	2/14/2017	11.62	14.00	3.16	2.38
	5/2/2017	12.18	14.55	2.60	2.37
	8/8/2017	11.08	14.30	3.58	3.22
	11/1/2017	12.58	12.65	2.54	0.07
	2/6/2018	12.26	14.18	2.59	1.92
	5/3/2018	12.18	13.95	2.69	1.77
	7/5/2018	12.26	12.36	2.86	0.10
	10/16/2018	11.38	14.27	3.33	2.89

Table 1

**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
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**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-24	3/1/2016	--	5.10	6.26	--
	5/1/2016	--	5.04	6.32	--
	9/22/2016	--	4.67	6.69	--
	11/15/2016	--	5.16	6.20	--
	2/14/2017	--	4.56	6.80	--
	5/2/2017	--	5.34	6.02	--
	8/8/2017	--	3.34	8.02	--
	11/1/2017	--	4.94	6.42	--
	2/6/2018	--	4.25	7.11	--
	5/3/2018	--	5.02	6.34	--
	7/5/2018	--	4.77	6.59	--
	10/16/2018	--	4.80	6.56	--
AW-25	3/1/2016	--	5.92	7.58	--
	5/1/2016	--	5.78	7.72	--
	9/22/2016	--	5.29	8.21	--
	11/15/2016	--	5.74	7.76	--
	2/14/2017	--	5.41	8.09	--
	5/2/2017	--	6.24	7.26	--
	8/8/2017	--	4.27	9.23	--
	11/1/2017	--	5.90	7.60	--
	2/6/2018	--	5.57	7.93	--
	5/3/2018	--	5.72	7.78	--
	7/5/2018	--	5.51	7.99	--
	10/16/2018	--	5.31	8.19	--
AW-26	3/1/2016	--	4.52	7.95	--
	5/1/2016	--	4.54	7.93	--
	9/22/2016	--	4.64	7.83	--
	11/15/2016	--	4.91	7.56	--
	2/14/2017	--	4.46	8.01	--
	5/2/2017	--	5.23	7.24	--
	8/8/2017	--	3.66	8.81	--
	11/1/2017	--	5.00	7.47	--
	2/6/2018	--	4.83	7.64	--
	5/3/2018	--	4.92	7.55	--
	7/5/2018	--	4.70	7.77	--
	10/16/2018	--	4.52	7.95	--
AW-27	3/1/2016	--	6.28	7.24	--
	5/1/2016	--	6.13	7.39	--
	9/22/2016	--	5.57	7.95	--
	11/15/2016	--	6.04	7.48	--
	2/14/2017	--	5.82	7.70	--
	5/2/2017	--	6.43	7.09	--
	8/8/2017	--	4.73	8.79	--
	11/1/2017	--	5.71	7.81	--
	2/6/2018	--	5.85	7.67	--
	5/3/2018	--	6.02	7.50	--
	7/5/2018	--	5.23	8.29	--
	10/16/2018	--	5.37	8.15	--
AW-28	3/1/2016	--	5.15	6.03	--
	5/1/2016	--	5.19	5.99	--
	9/22/2016	--	4.60	6.58	--
	11/15/2016	--	5.13	6.05	--
	2/14/2017	--	5.40	5.78	--
	5/2/2017	--	5.80	5.38	--
	8/8/2017	--	3.19	7.99	--
	11/1/2017	--	4.87	6.31	--
	2/6/2018	--	5.11	6.07	--
	5/3/2018	--	5.64	5.54	--
	7/5/2018	--	4.48	6.70	--
	10/16/2018	--	4.71	6.47	--

Table 1

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**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
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Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-30	3/1/2016	--	5.35	8.05	--
	5/1/2016	--	5.31	8.09	--
	9/22/2016	--	5.39	8.01	--
	11/15/2016	--	5.59	7.81	--
	2/14/2017	--	5.29	8.11	--
	5/2/2017	--	5.95	7.45	--
	8/8/2017	--	4.47	8.93	--
	11/1/2017	--	5.73	7.67	--
	2/6/2018	--	5.54	7.86	--
	5/3/2018	--	5.74	7.66	--
	7/5/2018	--	5.48	7.92	--
	10/16/2018	--	5.35	8.05	--
AW-31	3/1/2016	--	2.72	7.58	--
	5/1/2016	--	2.60	7.70	--
	9/22/2016	--	2.10	8.20	--
	11/15/2016	--	1.80	8.50	--
	2/14/2017	--	2.40	7.90	--
	5/2/2017	--	2.76	7.54	--
	8/8/2017	--	1.21	9.09	--
	11/1/2017	--	2.22	8.08	--
	2/6/2018	--	2.55	7.75	--
	5/3/2018	--	2.85	7.45	--
	7/5/2018	--	1.63	8.67	--
	10/17/2018	--	4.33	5.97	--
AW-32	3/1/2016	--	10.40	3.99	--
	5/1/2016	--	9.60	4.79	--
	9/22/2016	--	9.37	5.02	--
	11/15/2016	--	9.70	4.69	--
	2/14/2017	9.49	9.49	4.90	Sheen
	5/2/2017	9.91	10.04	4.46	0.13
	8/8/2017	--	7.68	6.71	--
	11/1/2017	--	9.46	4.93	--
	2/6/2018	--	10.00	4.39	--
	5/3/2018	--	10.02	4.37	--
	7/5/2018	--	8.87	5.52	--
	10/16/2018	--	8.40	5.99	--
AW-33	3/1/2016	--	5.43	7.65	--
	5/1/2016	--	5.35	7.73	--
	9/22/2016	--	4.92	8.16	--
	11/15/2016	--	5.39	7.69	--
	2/14/2017	--	5.32	7.76	--
	5/2/2017	--	6.79	6.29	--
	8/8/2017	--	4.00	9.08	--
	11/1/2017	--	5.26	7.82	--
	2/6/2018	--	5.18	7.90	--
	5/3/2018	--	5.29	7.79	--
	7/5/2018	--	5.11	7.97	--
	10/16/2018	--	4.95	8.13	--
AW-34	3/1/2016	--	7.57	5.70	--
	5/1/2016	--	7.36	5.91	--
	9/22/2016	--	6.40	6.87	--
	11/15/2016	--	7.11	6.16	--
	2/14/2017	--	7.36	5.91	--
	5/2/2017	--	8.04	5.23	--
	8/8/2017	--	5.50	7.77	--
	11/1/2017	--	6.60	6.67	--
	2/6/2018	--	7.18	6.09	--
	5/3/2018	--	7.61	5.66	--
	7/5/2018	--	6.79	6.48	--
	10/16/2018	--	6.73	6.54	--

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**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
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Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-36	3/1/2016	--	5.47	8.18	--
	5/1/2016	--	5.42	8.23	--
	9/22/2016	--	5.23	8.42	--
	11/15/2016	--	5.82	7.83	--
	2/14/2017	--	5.17	8.48	--
	5/2/2017	--	6.22	7.43	--
	8/8/2017	--	4.06	9.59	--
	11/1/2017	--	5.79	7.86	--
	2/6/2018	--	5.81	7.84	--
	5/3/2018	--	5.68	7.97	--
	7/5/2018	--	5.49	8.16	--
	10/16/2018	--	5.33	8.32	--
AW-37	3/1/2016	--	11.37	2.96	--
	5/1/2016	--	11.24	3.09	--
	9/22/2016	--	10.95	3.38	--
	11/15/2016	--	10.49	3.84	--
	2/14/2017	--	10.98	3.35	--
	5/2/2017	--	11.53	2.80	--
	8/8/2017	--	10.40	3.93	--
	11/1/2017	--	11.06	3.27	--
	2/6/2018	--	11.32	3.01	--
	5/3/2018	--	11.18	3.15	--
	7/5/2018	--	10.82	3.51	--
	10/16/2018	--	10.75	3.58	--
AW-38	3/1/2016	--	4.45	7.58	--
	5/1/2016			Not Measured	
	9/22/2016	3.80	3.82	8.23	0.02
	11/15/2016	4.17	4.18	7.86	0.01
	2/14/2017	4.48	4.49	7.55	0.01
	5/2/2017	5.11	5.12	6.92	0.01
	8/8/2017	3.37	3.52	8.64	0.15
	11/1/2017	--	4.06	7.97	--
	2/6/2018	4.51	4.59	7.51	0.08
	5/3/2018	4.74	4.78	7.28	0.04
	7/5/2018	3.83	3.85	8.20	0.02
	10/16/2018	3.79	3.80	8.24	0.01
AW-41	3/1/2016	--	9.15	6.00	--
	5/1/2016	--	9.71	5.44	--
	9/22/2016	--	9.15	6.00	--
	11/15/2016	--	9.47	5.68	--
	2/14/2017	--	8.97	6.18	--
	5/2/2017	--	9.50	5.65	--
	8/8/2017	--	8.04	7.11	--
	11/1/2017	--	9.15	6.00	--
	2/6/2018	--	9.16	5.99	--
	5/3/2018	--	9.28	5.87	--
	7/5/2018	--	9.18	5.97	--
	10/17/2018	--	8.72	6.43	--
AW-42	3/1/2016			Not Measured	
	5/1/2016	1.69	1.70	7.74	0.01
	9/22/2016	--	1.23	8.20	--
	11/15/2016	--	1.93	7.50	--
	2/14/2017	--	1.50	7.93	--
	5/2/2017	--	2.11	7.32	--
	8/8/2017	--	0.00	9.43	--
	11/1/2017	--	1.36	8.07	--
	2/6/2018	--	1.68	7.75	--
	5/3/2018	--	1.32	8.11	--
	7/5/2018	--	1.23	8.20	--
	10/16/2018	--	1.30	8.13	--

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**Groundwater Elevation and LNAPL Thickness**  
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**Savannah, Chatham County, Georgia**  
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Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-44	3/1/2016	--	10.03	3.38	--
	5/1/2016	--	10.00	3.41	--
	9/22/2016	--	9.65	3.76	--
	11/15/2016	--	9.39	4.02	--
	2/14/2017	--	9.55	3.86	--
	5/2/2017	--	10.11	3.30	--
	8/8/2017	--	9.25	4.16	--
	11/1/2017	--	9.84	3.57	--
	2/6/2018	--	9.87	3.54	--
	5/3/2018	--	9.80	3.61	--
	7/5/2018	--	11.60	1.81	--
	10/16/2018	--	9.56	3.85	--
AW-45	3/1/2016	--	12.14	2.99	--
	5/1/2016	--	12.12	3.01	--
	9/22/2016	--	11.78	3.35	--
	11/15/2016	--	11.51	3.62	--
	2/14/2017	--	11.88	3.25	--
	5/2/2017	--	12.22	2.91	--
	8/8/2017	--	11.22	3.91	--
	11/1/2017	--	11.79	3.34	--
	2/6/2018	--	12.10	3.03	--
	5/3/2018	--	11.98	3.15	--
	7/5/2018	--	9.54	5.59	--
	10/16/2018	--	11.56	3.57	--
AW-48	3/1/2016	--	6.82	4.31	--
	5/1/2016	--	6.10	5.03	--
	9/22/2016	--	5.58	5.55	--
	11/15/2016	--	5.49	5.64	--
	2/14/2017	--	5.72	5.41	--
	5/2/2017	--	6.39	4.74	--
	8/8/2017	--	4.82	6.31	--
	11/1/2017	--	5.72	5.41	--
	2/6/2018	--	5.98	5.15	--
	5/3/2018	--	6.11	5.02	--
	7/5/2018	--	5.42	5.71	--
	10/16/2018	--	5.35	5.78	--
AW-49	3/1/2016	13.10	15.94	1.99	2.84
	5/1/2016	12.73	16.76	2.18	4.03
	9/22/2016	13.22	13.47	2.24	0.25
	11/15/2016	13.00	13.19	2.47	0.19
	2/14/2017	12.99	13.21	2.48	0.22
	5/2/2017	13.69	13.96	1.77	0.27
	8/8/2017	12.24	12.45	3.23	0.21
	11/1/2017	13.20	13.50	2.26	0.30
	2/6/2018	13.21	13.54	2.24	0.33
	5/3/2018	13.33	13.65	2.12	0.32
	7/5/2018	13.18	13.45	2.28	0.27
	10/16/2018	12.57	12.82	2.89	0.25
AW-51	3/1/2016	10.48	11.41	2.16	0.93
	5/1/2016	9.90	10.62	2.76	0.72
	9/22/2016	10.35	11.67	2.24	1.32
	11/15/2016	9.41	9.62	3.31	0.21
	2/14/2017	9.84	10.17	2.87	0.33
	5/2/2017	10.85	11.34	1.84	0.49
	8/8/2017	9.21	9.98	3.45	0.77
	11/1/2017	10.31	11.12	2.34	0.81
	2/6/2018	10.43	11.29	2.22	0.86
	5/3/2018	9.93	11.45	2.64	1.52
	7/5/2018	10.08	11.20	2.54	1.12
	10/16/2018	9.52	10.75	3.08	1.23

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**Groundwater Elevation and LNAPL Thickness**  
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**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-52	3/1/2016	12.80	15.69	2.52	2.89
	5/1/2016	12.47	15.56	2.82	3.09
	9/22/2016	12.40	15.52	2.88	3.12
	11/15/2016	11.68	15.00	3.58	3.32
	2/14/2017			Not Measured	
	5/2/2017	13.39	16.42	1.91	3.03
	8/8/2017	11.72	14.84	3.56	3.12
	11/1/2017	12.68	15.32	2.67	2.64
	2/6/2018	13.08	15.22	2.35	2.14
	5/3/2018	12.82	15.40	2.54	2.58
	7/5/2018	12.23	14.92	3.12	2.69
	10/16/2018	12.03	15.03	3.27	3.00
AW-53	3/1/2016	6.62	6.92	3.67	0.30
	5/1/2016	6.51	6.76	3.78	0.25
	9/22/2016	6.06	6.28	4.24	0.22
	11/15/2016	5.88	6.36	4.38	0.48
	2/14/2017	6.39	6.60	3.91	0.21
	5/2/2017	6.77	7.34	3.48	0.57
	8/8/2017	5.50	5.72	4.80	0.22
	11/1/2017	6.25	6.44	4.05	0.19
	2/6/2018	6.51	6.83	3.77	0.32
	5/3/2018	6.49	6.95	3.77	0.46
	7/5/2018	6.02	6.21	4.28	0.19
	10/16/2018	6.20	6.32	4.11	0.12
AW-54	3/1/2016	5.95	14.88	3.41	8.93
	5/1/2016	5.83	15.81	3.37	9.98
	9/22/2016	5.51	9.60	4.55	4.09
	11/15/2016	5.08	15.84	4.01	10.76
	2/14/2017	5.05	15.62	4.07	10.57
	5/2/2017	5.48	19.23	3.17	13.75
	8/8/2017	6.12	6.32	4.51	0.20
	11/1/2017	5.54	12.78	4.06	7.24
	2/6/2018	5.14	15.00	4.08	9.86
	5/3/2018	6.79	7.00	3.84	0.21
	7/5/2018	5.61	9.22	4.52	3.61
	10/16/2018	4.62	15.89	4.39	11.27
AW-56	3/1/2016	9.32	14.05	2.64	4.73
	5/1/2016	8.48	14.55	3.28	6.07
	9/22/2016	9.39	15.09	2.43	5.70
	11/15/2016	7.88	13.39	3.97	5.51
	2/14/2017	8.63	13.85	3.26	5.22
	5/2/2017	11.15	11.45	1.46	0.30
	8/8/2017	11.04	11.25	1.58	0.21
	11/1/2017	12.31	14.05	0.09	1.74
	2/6/2018	11.94	12.14	0.68	0.20
	5/3/2018	12.16	12.35	0.46	0.19
	7/5/2018	11.96	12.24	0.65	0.28
	10/16/2018	10.84	11.14	1.77	0.30
AW-57	3/1/2016			Not Measured	
	5/1/2016	8.64	10.23	3.27	1.59
	9/22/2016	8.45	9.27	3.57	0.82
	11/15/2016	7.96	9.77	3.92	1.81
	2/14/2017	8.89	9.09	3.22	0.20
	5/2/2017	9.33	9.74	2.75	0.41
	8/8/2017	8.12	8.22	4.01	0.10
	11/1/2017	8.68	9.34	3.37	0.66
	2/6/2018	9.16	9.96	2.87	0.80
	5/3/2018	8.98	9.87	3.03	0.89
	7/5/2018	8.40	9.22	3.62	0.82
	10/18/2018	8.45	9.28	3.57	0.83

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**Groundwater Elevation and LNAPL Thickness**  
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Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-58	3/1/2016	--	8.61	NS	--
	5/1/2016	--	8.51	NS	--
	9/22/2016	--	8.15	NS	--
	11/15/2016	--	7.44	NS	--
	2/14/2017	--	6.04	NS	--
	5/2/2017	--	8.91	NS	--
	8/8/2017	--	7.45	NS	--
	11/1/2017	--	8.39	NS	--
	2/6/2018	--	5.56	NS	--
	5/3/2018	--	8.43	NS	--
	7/5/2018	--	8.11	NS	--
	10/16/2018	7.41	7.70	NS	0.29
AW-62	3/1/2016	--	9.24	NS	--
	5/1/2016	--	10.60	NS	--
	9/22/2016	9.60	9.60	NS	Sheen
	11/15/2016	9.42	9.42	NS	Sheen
	2/14/2017	4.92	4.92	NS	Sheen
	5/2/2017	10.92	10.92	NS	Sheen
	8/8/2017	--	5.40	NS	--
	11/1/2017	--	9.24	NS	Sheen
	2/6/2018	--	7.75	NS	Sheen
	5/3/2018	--	6.31	NS	--
	7/5/2018	--	9.09	NS	--
	10/16/2018	--	5.59	NS	--
AW-65	3/1/2016	11.45	13.20	1.56	1.75
	5/1/2016	11.53	13.51	1.45	1.98
	9/22/2016	10.75	12.41	2.27	1.66
	11/15/2016	10.41	12.62	2.53	2.21
	2/14/2017	11.01	12.13	2.09	1.12
	5/2/2017	11.78	13.82	1.19	2.04
	8/8/2017	9.30	11.50	3.64	2.20
	11/1/2017	10.57	12.12	2.47	1.55
	2/6/2018	11.70	12.87	1.39	1.17
	5/3/2018	11.20	12.85	1.82	1.65
	7/5/2018	10.20	11.87	2.82	1.67
	10/16/2018	9.71	11.40	3.31	1.69
AW-67	3/1/2016	--	12.33	-1.01	--
	5/1/2016	--	13.37	-2.05	--
	9/22/2016	--	8.85	2.47	--
	11/15/2016	--	12.33	-1.01	--
	2/14/2017	--	6.10	5.22	--
	5/2/2017	--	11.09	0.23	--
	8/8/2017	--	7.89	3.43	--
	11/1/2017	--	10.55	0.77	--
	2/6/2018	--	10.45	0.87	--
	5/3/2018	--	9.16	2.16	--
	7/5/2018	--	10.72	0.60	--
	10/16/2018	--	8.41	2.91	--
AW-68	3/1/2016	11.75	15.11	1.56	3.36
	5/1/2016	10.48	13.90	2.82	3.42
	9/22/2016	11.66	16.90	1.37	5.24
	11/15/2016	10.88	18.10	1.87	7.22
	2/14/2017	9.89	17.90	2.74	8.01
	5/2/2017	11.19	18.46	1.55	7.27
	8/8/2017	9.56	16.91	3.17	7.35
	11/1/2017	11.02	19.24	1.58	8.22
	2/6/2018	11.69	11.92	2.08	0.23
	5/3/2018	11.46	11.95	2.27	0.49
	7/5/2018	11.48	13.97	1.96	2.49
	10/16/2018	10.90	10.93	2.90	0.03

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Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-69	3/1/2016			Not Measured	
	5/1/2016	--	6.90	2.54	--
	9/22/2016	--	4.50	4.94	--
	11/15/2016	--	7.36	2.08	--
	2/14/2017	--	6.39	3.05	--
	5/2/2017	--	7.40	2.04	--
	8/8/2017	--	5.45	3.99	--
	11/1/2017	--	6.62	2.82	--
	2/6/2018	--	7.43	2.01	--
	5/3/2018	--	7.25	2.19	--
	7/5/2018	--	6.42	3.02	--
	10/16/2018	--	6.44	3.00	--
AW-70	3/1/2016	--	11.18	1.07	--
	5/1/2016	--	11.11	1.14	--
	9/22/2016	--	9.57	2.68	--
	11/15/2016	--	10.44	1.81	--
	2/14/2017	--	10.06	2.19	--
	5/2/2017	--	10.85	1.40	--
	8/8/2017	--	8.87	3.38	--
	11/1/2017	--	10.52	1.73	--
	2/6/2018	--	10.67	1.58	--
	5/3/2018	--	10.11	2.14	--
	7/5/2018	--	10.38	1.87	--
	10/16/2018	--	9.20	3.05	--
AW-71	3/1/2016	--	11.05	2.24	--
	5/1/2016	--	10.79	2.50	--
	9/22/2016	--	10.53	2.76	--
	11/15/2016	--	10.22	3.07	--
	2/14/2017	--	10.91	2.38	--
	5/2/2017	--	11.46	1.83	--
	8/8/2017	--	9.75	3.54	--
	11/1/2017	--	10.64	2.65	--
	2/6/2018	--	11.55	1.74	--
	5/3/2018	--	11.28	2.01	--
	7/5/2018	--	10.45	2.84	--
	10/16/2018	--	10.45	2.84	--
AW-72	3/1/2016	--	8.78	1.34	--
	5/1/2016	--	7.25	2.87	--
	9/22/2016	--	8.85	1.27	--
	11/15/2016	--	6.57	3.55	--
	2/14/2017	--	7.67	2.45	--
	5/2/2017	--	9.76	0.36	--
	8/8/2017	--	7.28	2.84	--
	11/1/2017	--	9.26	0.86	--
	2/6/2018	--	8.28	1.84	--
	5/3/2018	--	7.78	2.34	--
	7/5/2018	--	8.84	1.28	--
	10/16/2018	--	7.26	2.86	--
AW-73	3/1/2016			Not Measured	
	5/1/2016			Not Measured	
	9/22/2016			Not Measured	
	11/15/2016	--	8.67	3.37	--
	2/14/2017	--	9.26	2.78	--
	5/2/2017	--	9.68	2.36	--
	8/8/2017			Not Measured	
	11/1/2017	--	9.02	3.02	--
	2/6/2018	--	9.60	2.44	--
	5/3/2018	--	9.42	2.62	--
	7/5/2018	--	8.76	3.28	--
	10/16/2018	--	8.70	3.34	--

Table 1

**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-74	3/1/2016	9.27	10.99	0.44	1.72
	5/1/2016	6.78	7.96	3.01	1.18
	9/22/2016	9.53	13.71	-0.18	4.18
	11/15/2016	6.46	7.05	3.41	0.59
	2/14/2017	7.11	10.21	2.40	3.10
	5/2/2017	10.11	13.90	-0.70	3.79
	8/8/2017	6.52	9.55	3.00	3.03
	11/1/2017	10.32	10.51	-0.39	0.19
	2/6/2018	7.24	9.23	2.43	1.99
	5/3/2018	7.41	9.16	2.29	1.75
	7/5/2018	9.31	11.03	0.40	1.72
	10/16/2018	6.74	9.31	2.84	2.57
AW-75	3/1/2016	--	11.04	NS	--
	5/1/2016	--	6.57	NS	--
	9/22/2016	--	11.74	NS	--
	11/15/2016	--	6.40	NS	--
	2/14/2017	--	7.35	NS	--
	5/2/2017	--	12.36	NS	--
	8/8/2017	--	7.56	NS	--
	11/1/2017	--	11.59	NS	--
	2/6/2018	--	8.10	NS	--
	5/3/2018	--	7.58	NS	--
	7/5/2018	--	11.37	NS	--
	10/16/2018	--	6.95	NS	--
AW-76	3/1/2016	--	13.61	NS	--
	5/1/2016	--	14.07	NS	--
	9/22/2016	--	12.41	NS	--
	11/15/2016	--	13.86	NS	--
	2/14/2017	--	7.34	NS	--
	5/2/2017	--	13.00	NS	--
	8/8/2017	--	7.49	NS	--
	11/1/2017	--	12.81	NS	--
	2/6/2018	--	8.14	NS	--
	5/3/2018	--	7.46	NS	--
	7/5/2018	--	12.75	NS	--
	10/16/2018	--	6.90	NS	--
AW-77	3/1/2016	--	7.91	NS	--
	5/1/2016	--	9.59	NS	--
	9/22/2016	--	9.59	NS	--
	11/15/2016	--	9.18	NS	--
	2/14/2017	--	4.43	NS	--
	5/2/2017	--	9.71	NS	--
	8/8/2017	--	5.25	NS	--
	11/1/2017	--	9.22	NS	--
	2/6/2018	--	6.92	NS	--
	5/3/2018	--	5.98	NS	--
	7/5/2018	--	9.16	NS	--
	10/16/2018	--	5.07	NS	--
AW-78	3/1/2016	--	6.91	NS	--
	5/1/2016	--	6.77	NS	--
	9/22/2016	--	6.36	NS	--
	11/15/2016	--	6.42	NS	--
	2/14/2017	--	6.13	NS	--
	5/2/2017	--	7.42	NS	--
	8/8/2017	--	5.25	NS	--
	11/1/2017	--	6.37	NS	--
	2/6/2018	--	7.15	NS	--
	5/3/2018	--	6.80	NS	--
	7/5/2018	--	6.40	NS	--
	10/16/2018	--	5.80	NS	--

Table 1

**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
AW-79	3/1/2016	--	10.95	NS	--
	5/1/2016	--	11.03	NS	--
	9/22/2016	--	5.07	NS	--
	11/15/2016	--	10.73	NS	--
	2/14/2017	--	5.55	NS	--
	5/2/2017	--	7.29	NS	--
	8/8/2017	--	4.82	NS	--
	11/1/2017	--	9.55	NS	--
	2/6/2018	--	6.50	NS	--
	5/3/2018	--	5.18	NS	--
	7/5/2018	--	9.73	NS	--
	10/16/2018	--	4.44	NS	--
AW-82	3/1/2016	9.95	12.84	NS	2.89
	5/1/2016	9.65	12.63	NS	2.98
	9/22/2016	9.54	12.62	NS	3.08
	11/15/2016	8.97	11.84	NS	2.87
	2/14/2017	9.77	12.35	NS	2.58
	5/2/2017	11.10	11.41	NS	0.31
	8/8/2017	9.60	9.72	NS	0.12
	11/1/2017	10.11	11.72	NS	1.61
	2/6/2018	10.85	11.08	NS	0.23
	5/3/2018	10.70	10.88	NS	0.18
	7/5/2018	10.20	10.31	NS	0.11
	10/16/2018	9.99	10.02	NS	0.03
RAIL LOADING - N	3/1/2016	--	7.31	5.30	--
	5/1/2016	--	7.25	5.36	--
	9/22/2016	--	6.42	6.19	--
	11/15/2016	--	7.29	5.32	--
	2/14/2017	--	7.22	5.39	--
	5/2/2017	--	8.02	4.59	--
	8/8/2017	--	4.58	8.03	--
	11/1/2017	--	6.53	6.08	--
	2/6/2018	--	7.00	5.61	--
	5/3/2018	--	7.45	5.16	--
	7/5/2018	--	6.15	6.46	--
	10/16/2018	--	6.09	6.52	--
RAIL LOADING - S	3/1/2016	--	6.22	6.08	--
	5/1/2016	--	6.10	6.20	--
	9/22/2016	--	5.28	7.02	--
	11/15/2016	--	6.10	6.20	--
	2/14/2017	--	5.91	6.39	--
	5/2/2017	--	6.63	5.67	--
	8/8/2017	--	3.42	8.88	--
	11/1/2017	--	5.48	6.82	--
	2/6/2018	--	9.01	3.29	--
	5/3/2018	--	5.92	6.38	--
	7/5/2018	--	5.21	7.09	--
	10/17/2018	--	5.00	7.30	--
RAIL LOADING - M	3/1/2016			Damaged Casing	
	5/1/2016			Damaged Casing	
	9/22/2016			Damaged Casing	
	11/15/2016			Damaged Casing	
	2/14/2017			Damaged Casing	
	5/2/2017			Damaged Casing	
	8/8/2017			Damaged Casing	
	11/1/2017			Damaged Casing	
	2/6/2018			Damaged Casing	
	5/3/2018			Damaged Casing	
	7/5/2018			Damaged Casing	
	10/16/2018			Damaged Casing	

**Table 1**

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**Groundwater Elevation and LNAPL Thickness**  
**March 2016 to Current**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Location ID	Measurement Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Groundwater Elevation (ft AMSL)	LNAPL Thickness (ft)
POD - 1	3/1/2016	--	11.60	NS	--
	5/1/2016	--	12.04	NS	--
	9/22/2016	--	10.35	NS	--
	11/15/2016	--	11.43	NS	--
	2/14/2017	--	4.65	NS	--
	5/2/2017	--	10.77	NS	--
	8/8/2017	--	4.45	NS	--
	11/1/2017	--	9.31	NS	Sheen
	2/6/2018	--	9.31	NS	Sheen
	5/3/2018	--	5.82	NS	--
	7/5/2018	--	9.82	NS	--
	10/16/2018	--	5.20	NS	--

## Notes:

Dash (--) indicates not applicable

NS = Not Surveyed

ft btoc = feet below top of casing

ft AMSL = feet above mean sea level

Table 2

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**LNAPL Removal Summary**  
**IMTT, Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Well ID	Measurement Date	Measured In-Well LNAPL Thickness (feet)	LNAPL Removed Between Measurements (gallons)	Cumulative Total LNAPL Removal (gallons)	Comments
	Short-term Skimming Test			49.3	
	9/14/2016	3.93	--	49.3	
	9/21/2016	0.35	31.7	81.0	Installed LNAPL Skimmer
	9/28/2016	0.26	20.3	101.3	
	10/5/2016	0.23	19.0	120.3	LNAPL skimmer shutdown due to Hurricane Matthew
	10/13/2016	4.06	0.0	120.3	LNAPL skimmer restarted
	10/20/2016	0.11	97.0	217.3	LNAPL skimmer shutdown due to nearly full tank
	10/28/2016	3.40	0.0	217.3	LNAPL skimmer restarted
	11/4/2016	3.45	2.0	219.3	
	11/15/2016	2.89	0.0	219.3	Batteries dead, system restarted
	11/22/2016	0.27	4.5	223.8	
	11/29/2016	0.34	26.5	250.3	
	12/5/2016	2.83	2.0	252.3	Batteries dead, system restarted
	12/7/2016	0.20	46.6	298.9	
	12/14/2016	0.95	14.0	312.9	Batteries dead, system restarted
	12/21/2016	0.33	21.7	334.6	
	12/27/2016	0.28	16.7	351.3	
	1/4/2017	0.08	53.4	404.6	
	1/9/2017	0.24	24.8	429.4	
	1/19/2017	0.12	39.0	468.4	
	1/26/2017	0.28	30.0	498.4	Estimated
	1/31/2017	0.18	24.6	523.0	
	2/7/2017	0.23	25.4	548.4	
	2/13/2017	0.30	22.0	570.4	
	2/14/2017	0.32	4.2	574.6	
	2/23/2017	0.27	34.1	608.7	
	3/3/2017	2.20	2.5	611.2	
	3/7/2017	2.37	16.7	627.8	
	3/10/2017	0.51	20.8	648.7	
	3/16/2017	2.55	8.8	657.5	Batteries dead, system restarted
	3/23/2017	1.07	55.0	712.5	Batteries dead, system restarted
	3/31/2017	0.22	15.0	727.5	Estimated
	4/3/2017	0.24	11.2	738.7	
	4/13/2017	0.18	30.4	769.1	
	4/18/2017	0.16	13.9	783.0	
	4/27/2017	0.11	25.1	808.1	
	5/2/2017	0.11	9.5	817.6	
	5/10/2017	0.11	27.0	844.6	
	5/17/2017	0.10	15.0	859.6	
	5/26/2017	0.08	28.5	888.1	
	6/1/2017	0.25	14.5	902.6	
	6/8/2017	0.20	10.5	913.1	
	6/15/2017	0.16	10.1	923.2	
	6/20/2017	0.17	7.4	930.6	
	6/22/2017	0.18	7.0	937.6	
	6/26/2017	0.15	6.0	943.6	
	6/30/2017	0.21	4.2	947.8	
	7/7/2017	0.13	12.0	959.8	
	7/12/2017	0.16	11.8	971.6	
	7/19/2017	0.19	9.2	980.8	
	7/26/2017	0.04	22.2	1003.0	
	8/2/2017	0.23	6.8	1009.8	
	8/9/2017	0.07	13.2	1023.0	
	8/17/2017	0.22	18.0	1041.0	
	8/22/2017	0.18	11.8	1052.8	
	8/30/2017	0.08	51.7	1104.5	
	9/6/2017	0.10	5.5	1110.0	Shutdown due to Hurricane Irma
	9/21/2017	3.43	0.0	1110.0	LNAPL skimmer restarted
	9/22/2017	0.20	5.0	1115.0	
	9/29/2017	0.24	7.6	1122.6	
	10/6/2017	0.21	3.9	1126.5	
	10/12/2017	0.61	5.0	1131.5	Estimated
	10/19/2017	0.23	6.0	1137.5	
	11/2/2017	0.23	16.0	1153.5	
	11/8/2017	0.24	4.5	1158.0	
	11/15/2017	0.22	10.5	1168.5	
	11/22/2017	0.27	9.0	1177.5	
	11/30/2017	2.15	7.0	1184.5	Estimated
	12/6/2017	0.23	20.0	1204.5	
	12/13/2017	0.19	10.0	1214.5	
	12/21/2017	0.20	25.0	1239.5	
	12/28/2017	0.24	17.0	1256.5	
	1/5/2018	0.28	24.9	1281.4	
	1/12/2018	0.29	29.1	1310.5	
	1/19/2018	0.25	18.0	1328.5	
	1/26/2018	0.31	28.0	1356.5	
	2/1/2018	0.29	24.0	1380.5	
	2/7/2018	0.37	22.0	1402.5	
	2/15/2018	0.22	25.0	1427.5	
	2/22/2018	0.26	21.0	1448.5	
	2/28/2018	0.21	11.0	1459.5	
	3/8/2018	0.36	21.0	1480.5	
	3/15/2018	0.20	14.0	1494.5	
	3/22/2018	1.50	8.0	1502.5	System off due to malfunction
	3/29/2018	2.42	0.0	1502.5	System off due to malfunction
	5/25/2018	0.75	5.0	1507.5	System restarted
	5/31/2018	1.94	9.3	1516.8	System batteries dead on arrival
	6/7/2018	0.21	12.4	1529.2	
	6/14/2018	0.19	5.3	1534.5	
	6/22/2018	0.22	9.2	1543.7	
	6/28/2018	0.23	0.0	1543.7	
	7/5/2018	0.12	11.0	1554.7	
	7/9/2018	0.16	5.0	1559.7	
	7/19/2018	0.24	9.0	1568.7	
	7/25/2018	0.21	0.0	1568.7	
	8/1/2018	0.24	8.5	1577.2	
	8/9/2018	0.22	6.2	1583.4	
	8/16/2018	0.24	6.0	1589.4	
	8/23/2018	0.21	7.3	1596.7	
	8/30/2018	0.25	2.0	1598.7	
	9/5/2018	0.26	6.0	1604.7	
	9/14/2018	0.30	8.0	1612.7	
	9/21/2018	0.25	4.0	1616.7	
	9/25/2018	0.24	8.0	1624.7	
	10/4/2018	0.17	2.4	1627.1	
	10/16/2018	1.10	6.2	1633.3	
	10/23/2018	2.17	0.0	1633.3	
	11/1/2018	1.02	12.7	1646.0	
	11/8/2018	0.30	8.5	1654.5	

LNAPL Skimming Underway

Table 2

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**LNAPL Removal Summary**  
**IMTT, Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Well ID	Measurement Date	Measured In-Well LNAPL Thickness (feet)	LNAPL Removed Between Measurements (gallons)	Cumulative Total LNAPL Removal (gallons)	Comments
	Short-term Skimming Test			45.3	
	9/14/2016	3.65	--	45.3	Installed LNAPL Skimmer
	9/21/2016	0.29	134.4	179.7	
	9/28/2016	0.23	70.8	250.5	
	10/5/2016	0.13	55.5	306.0	LNAPL skimmer shutdown due to Hurricane Matthew
	10/13/2016	4.73	0.0	306.0	LNAPL skimmer restarted
	10/20/2016	3.16	267.0	573.0	LNAPL skimmer shutdown due to full tank
	10/28/2016	3.25	0.0	573.0	LNAPL skimmer restarted
	11/4/2016	0.32	134.0	707.0	
	11/15/2016	0.19	222.0	929.0	LNAPL skimmer shutdown due to full tank
	11/22/2016	1.30	65.0	994.0	LNAPL skimmer restarted
	11/29/2016	1.38	50.0	1044.0	LNAPL skimmer shutdown due to full tank
	12/7/2016	0.53	0.0	1044.0	LNAPL skimmer shutdown due to full tank
	12/14/2016	0.65	0.0	1044.0	LNAPL skimmer shutdown due to full tank
	12/21/2016	1.37	0.0	1044.0	LNAPL skimmer restarted
	12/27/2016	0.37	29.7	1073.7	
	1/4/2017	0.21	38.8	1112.5	
	1/9/2017	0.27	15.9	1128.4	
	1/19/2017	2.03	15.7	1144.1	
	1/20/2017	1.38	5.4	1149.5	System off upon arrival
	1/23/2017	1.01	0.0	1149.5	System off upon arrival
	1/26/2017	0.30	20.0	1169.5	Estimated
	1/31/2017	0.25	21.7	1191.2	
	2/7/2017	0.13	21.5	1212.7	
	2/13/2017	0.31	27.0	1239.7	
	2/14/2017	0.22	1.7	1241.4	
	2/23/2017	0.21	28.4	1269.8	
	3/3/2017	1.88	11.6	1281.4	
	3/7/2017	0.26	21.7	1303.1	
	3/10/2017	0.31	9.4	1312.5	
	3/16/2017	1.14	16.0	1328.5	Batteries unseated, system restarted
	3/23/2017	0.76	2.2	1330.7	
	3/31/2017	0.31	13.0	1343.7	Estimated
	4/3/2017	0.28	6.0	1349.7	
	4/13/2017	0.26	22.5	1372.2	
	4/18/2017	0.40	11.7	1383.9	
	4/27/2017	0.35	16.3	1400.2	
	5/2/2017	0.27	9.5	1409.7	
	5/10/2017	0.28	19.7	1429.4	
	5/17/2017	0.23	20.3	1449.7	
	5/26/2017	0.17	22.0	1471.7	
	6/1/2017	0.24	12.0	1483.7	
	6/8/2017	0.13	5.3	1489.0	
	6/15/2017	0.28	9.3	1498.3	
	6/20/2017	0.22	9.4	1507.7	
	6/22/2017	0.28	4.0	1511.7	
	6/26/2017	0.26	5.0	1516.7	
	6/30/2017	0.28	1.8	1518.5	
	7/7/2017	0.25	7.3	1525.7	
	7/12/2017	0.26	12.0	1537.7	
	7/19/2017	0.23	11.0	1548.7	
	7/26/2017	0.18	14.0	1562.7	
	8/2/2017	0.23	41.0	1603.7	
	8/9/2017	0.24	38.0	1641.7	
	8/17/2017	0.24	33.9	1675.6	
	8/22/2017	0.20	35.5	1711.1	
	8/30/2017	0.22	48.9	1760.0	
	9/6/2017	0.25	34.6	1794.6	Shutdown due to Hurricane Irma
	9/21/2017	2.33	0.0	1794.6	LNAPL skimmer restarted
AW-49	9/22/2017	0.25	22.0	1816.6	
	9/29/2017	0.28	83.3	1899.9	
	10/6/2017	1.60	1.1	1901.0	System off upon arrival
	10/12/2017	0.31	20.0	1921.0	Estimated
	10/19/2017	0.20	46.4	1967.4	
	11/2/2017	0.28	45.3	2012.7	
	11/8/2017	0.13	5.0	2017.7	
	11/15/2017	0.82	0.0	2017.7	System malfunction
	11/22/2017	1.37	0.0	2017.7	System malfunction
	11/30/2017	0.21	15.0	2032.7	Estimated
	12/6/2017	0.16	4.0	2036.7	System malfunction
	12/13/2017	0.69	5.0	2041.7	System malfunction
	12/21/2017	0.16	36.0	2077.7	
	12/28/2017	0.96	15.0	2092.7	
	1/5/2018	0.60	0.0	2092.7	
	1/12/2018	0.25	17.0	2109.7	
	1/19/2018	0.21	13.0	2122.7	
	1/26/2018	0.28	11.0	2133.7	
	2/1/2018	0.03	5.0	2138.7	
	2/7/2018	0.32	25.0	2163.7	
	2/15/2018	0.06	12.0	2175.7	
	2/22/2018	0.21	11.0	2186.7	
	2/28/2018	0.06	10.0	2196.7	
	3/8/2018	0.30	4.0	2200.7	
	3/15/2018	1.51	1.0	2201.7	System off due to malfunction
	3/22/2018	1.55	2.0	2203.7	
	3/29/2018	0.17	8.0	2211.7	
	4/6/2018	0.22	8.0	2219.7	
	4/12/2018	0.27	8.0	2227.7	
	4/18/2018	0.27	8.0	2235.7	
	4/27/2018	0.24	8.0	2243.7	
	5/3/2018	0.32	4.0	2247.7	
	5/9/2018	0.23	7.0	2254.7	
	5/17/2018	0.21	18.5	2273.2	
	5/25/2018	0.28	4.5	2277.7	
	5/31/2018	0.26	3.5	2281.2	
	6/7/2018	0.97	3.2	2284.4	
	6/14/2018	0.21	6.8	2291.2	
	6/22/2018	0.26	9.4	2300.6	
	6/28/2018	0.87	4.1	2304.7	
	7/5/2018	0.25	17.5	2322.2	
	7/9/2018	0.27	7.7	2329.9	
	7/19/2018	0.15	16.5	2346.4	
	7/25/2018	0.28	24.8	2371.2	
	8/1/2018	0.28	20.5	2391.7	
	8/9/2018	1.78	8.5	2400.2	
	8/16/2018	0.23	27.5	2427.7	
	8/23/2018	0.22	21.5	2449.2	
	8/30/2018	0.29	2.3	2451.5	
	9/5/2018	0.18	16.0	2467.5	
	9/14/2018	0.23	19.5	2487.0	
	9/21/2018	0.36	14.6	2501.6	
	9/25/2018	0.22	8.4	2510.0	
	10/4/2018	0.19	15.5	2525.5	
	10/10/2018	0.13	8.4	2533.9	
	10/17/2018	0.39	31.3	2565.2	
	10/23/2018	1.04	10.0	2575.2	
	11/8/2018	0.73	0.0	2575.2	

LNAPL Skimming Underway

Table 2

**LNAPL Removal Summary**  
**IMTT, Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Well ID	Measurement Date	Measured In-Well LNAPL Thickness (feet)	LNAPL Removed Between Measurements (gallons)	Cumulative Total LNAPL Removal (gallons)	Comments
	Short-term Skimming Test			119.4	
	1/19/2017	3.89	--	119.4	Installed LNAPL Skimmer
	1/20/2017	0.32	11.3	130.7	
	1/26/2017	0.32	20.0	150.7	Estimated
	1/31/2017	0.29	16.3	167.0	
	2/7/2017	0.29	95.9	262.9	
	2/13/2017	0.46	15.6	278.5	
	2/14/2017	0.23	2.5	281.0	
	2/23/2017	0.35	12.5	293.5	
	3/3/2017	0.13	10.5	304.0	
	3/7/2017	0.30	4.3	308.3	
	3/10/2017	0.32	10.6	318.8	
	3/16/2017	0.23	6.2	325.0	
	3/23/2017	0.23	72.0	397.0	
	3/31/2017	1.32	10.2	407.2	Estimated
	4/3/2017	0.04	157.5	564.7	
	4/13/2017	0.25	13.3	578.0	
	4/18/2017	0.26	9.1	587.1	
	4/27/2017	0.34	10.9	598.0	
	5/2/2017	1.14	8.3	606.3	
	5/10/2017	0.29	13.7	620.0	
	5/17/2017	0.23	12.0	632.0	
	5/26/2017	0.19	14.7	646.7	
	6/1/2017	0.30	5.3	652.0	
	6/8/2017	0.17	8.1	660.1	
	6/15/2017	0.13	9.3	669.4	
	6/20/2017	0.25	4.6	674.0	
	6/22/2017	0.16	27.2	701.2	
	6/26/2017	0.03	13.9	715.1	
	6/30/2017	0.22	10.0	725.1	
	7/7/2017	0.21	13.0	738.1	
	7/12/2017	0.21	10.0	748.1	
	7/19/2017	0.27	12.0	760.1	
	7/26/2017	0.18	9.7	769.8	
	8/2/2017	0.27	7.3	777.1	
	8/9/2017	0.14	15.0	792.1	
	8/17/2017	0.23	13.0	805.1	
	8/22/2017	0.27	13.5	818.6	
	8/30/2017	0.10	19.5	838.1	
	9/6/2017	0.26	15.0	853.1	Shutdown due to Hurricane Irma
	9/21/2017	2.24	0.0	853.1	LNAPL skimmer restarted
	9/22/2017	0.21	3.0	856.1	
	9/29/2017	0.17	16.2	872.3	
	10/6/2017	0.97	0.0	872.3	System off upon arrival
	10/12/2017	0.16	12.0	884.3	Estimated
	10/19/2017	1.22	6.8	891.1	System off upon arrival
	11/2/2017	0.24	26.9	918.0	
	11/8/2017	0.22	6.2	924.2	
	11/15/2017	0.19	6.8	931.0	
	11/22/2017	0.27	9.0	940.0	
AW-11	11/30/2017	0.25	10.0	950.0	Estimated
	12/6/2017	0.22	4.0	954.0	
	12/13/2017	0.23	6.0	960.0	
	12/21/2017	0.13	6.0	966.0	
	12/28/2017	0.25	6.6	972.6	
	1/5/2018	0.23	5.4	978.0	
	1/12/2018	0.21	6.0	984.0	
	1/19/2018	0.28	7.2	991.2	
	1/26/2018	0.25	3.8	995.0	
	2/1/2018	0.28	4.0	999.0	
	2/7/2018	0.32	6.0	1005.0	
	2/15/2018	0.24	5.0	1010.0	
	2/22/2018	0.22	5.0	1015.0	
	2/28/2018	0.23	3.0	1018.0	
	3/8/2018	0.32	4.0	1022.0	
	3/15/2018	0.24	8.0	1030.0	
	3/22/2018	0.18	6.0	1036.0	
	3/29/2018	0.33	6.6	1042.6	
	4/6/2018	0.31	4.4	1047.0	
	4/12/2018	0.23	3.3	1050.3	
	4/18/2018	0.24	7.7	1058.0	
	4/27/2018	0.22	3.2	1061.2	
	5/3/2018	0.30	3.8	1065.0	
	5/9/2018	0.22	6.4	1071.4	
	5/17/2018	0.25	7.5	1078.9	
	5/25/2018	0.22	6.3	1085.2	
	5/31/2018	0.31	2.4	1087.6	
	6/7/2018	0.24	5.5	1093.1	
	6/14/2018	0.13	8.3	1101.4	
	6/22/2018	0.29	13.0	1114.4	
	6/28/2018	0.34	4.0	1118.4	
	7/5/2018	0.22	8.3	1126.7	
	7/9/2018	0.23	4.1	1130.8	
	7/19/2018	0.23	15.6	1146.4	
	7/25/2018	0.24	6.0	1152.4	
	8/1/2018	0.25	11.0	1163.4	
	8/9/2018	0.25	13.6	1177.0	
	8/16/2018	0.22	12.4	1189.4	
	8/23/2018	0.17	6.2	1195.6	
	8/30/2018	0.22	2.0	1197.6	
	9/5/2018	0.22	9.0	1206.6	
	9/14/2018	0.22	18.0	1224.6	
	9/21/2018	0.28	0.5	1225.1	
	9/25/2018	0.24	7.9	1233.0	
	10/4/2018	0.32	9.6	1242.6	
	10/10/2018	0.22	4.5	1247.1	
	10/17/2018	0.25	9.2	1256.3	
	10/23/2018	0.24	6.0	1262.3	
	11/1/2018	0.23	10.5	1272.8	
	11/8/2018	0.23	7.5	1280.3	

LNAPL Skimming Underway

Table 2

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**LNAPL Removal Summary**  
**IMTT, Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Well ID	Measurement Date	Measured In-Well LNAPL Thickness (feet)	LNAPL Removed Between Measurements (gallons)	Cumulative Total LNAPL Removal (gallons)	Comments
	Short-term Skimming Test			131.3	
	2/23/2017	5.05	--	131.3	
	2/23/2017	0.35	40.5	171.8	Installed LNAPL Skimmer Tank initially contained ~30 gallons of diesel
	3/3/2017	0.28	33.9	205.7	
	3/7/2017	4.75	15.0	220.7	Estimated due to tank failure
	3/10/2017	3.56	11.5	232.2	
	3/16/2017	5.04	6.2	238.4	
	3/23/2017	1.84	33.5	271.9	Drum full, switched to 275-gal tank
	3/31/2017	0.25	8.2	280.1	Estimated
	4/3/2017	0.18	13.0	293.1	
	4/13/2017	0.15	33.8	326.9	
	4/18/2017	3.00	13.7	340.6	
	4/27/2017	3.25	11.0	351.6	
	5/2/2017	0.22	24.3	375.9	
	5/10/2017	0.46	24.0	399.9	
	5/17/2017	0.45	29.0	428.9	
	5/26/2017	0.03	36.0	464.9	
	6/1/2017	0.28	19.0	483.9	
	6/8/2017	1.73	8.5	492.4	
	6/15/2017	0.21	33.5	525.9	
	6/20/2017	0.24	15.0	540.9	
	6/22/2017	0.14	7.0	547.9	
	6/26/2017	0.05	14.0	561.9	
	6/30/2017	0.09	19.0	580.9	
	7/7/2017	0.19	23.0	603.9	
	7/12/2017	0.09	24.6	628.5	
	7/19/2017	0.17	41.4	669.9	
	7/26/2017	0.13	17.3	687.2	
	8/2/2017	6.20	3.0	690.2	Pump off on arrival, solenoid not cycling
	8/9/2017	0.11	32.0	722.2	
	8/17/2017	0.12	30.0	752.2	
	8/22/2017	0.18	20.5	772.7	
	8/30/2017	0.17	24.5	797.2	
	9/6/2017	5.27	11.0	808.2	Shutdown due to Hurricane Irma
	9/21/2017	5.70	0.0	808.2	LNAPL skimmer restarted
	9/22/2017	0.24	7.0	815.2	
	9/29/2017	0.19	27.5	842.7	
	10/6/2017	0.20	17.1	859.8	
	10/12/2017	5.55	10.0	869.8	System off upon arrival
	10/19/2017	4.90	6.5	876.3	System off upon arrival
	11/2/2017	0.06	53.5	929.8	System off upon arrival
	11/8/2017	0.29	18.0	947.8	
	11/15/2017	4.47	4.0	951.8	System off upon arrival
	11/22/2017	0.15	26.0	977.8	
	11/30/2017	0.22	15.0	992.8	Estimated
	12/6/2017	3.67	10.4	1003.2	
	12/13/2017	0.22	25.3	1028.5	
	12/21/2017	0.10	25.0	1053.5	
	12/28/2017	0.25	20.0	1073.5	
	1/5/2018	0.08	26.0	1099.5	
	1/12/2018	0.23	14.0	1113.5	
	1/19/2018	0.18	23.0	1136.5	
	1/26/2018	0.68	24.0	1160.5	
	2/1/2018	0.09	10.0	1170.5	
	2/7/2018	0.32	12.0	1182.5	
	2/15/2018	0.21	18.0	1200.5	
	2/22/2018	0.18	20.0	1220.5	
	2/28/2018	0.21	14.0	1234.5	
	3/8/2018	4.52	8.0	1242.5	
	3/15/2018	3.56	0.0	1242.5	System off due to malfunction
	3/22/2018	4.15	0.0	1242.5	
	3/29/2018	0.32	21.0	1263.5	
	4/6/2018	0.24	21.0	1284.5	
	4/12/2018	0.22	13.5	1298.0	
	4/18/2018	0.12	20.9	1318.9	
	4/27/2018	0.65	16.7	1335.6	
	5/3/2018	0.19	14.5	1350.1	
	5/9/2018	0.26	15.4	1365.5	
	5/17/2018	0.26	19.0	1384.5	
	5/25/2018	0.25	20.0	1404.5	
	5/31/2018	0.14	14.3	1418.8	
	6/7/2018	0.24	19.3	1438.1	
	6/14/2018	0.22	18.8	1456.9	
	6/22/2018	0.42	24.2	1481.1	
	6/28/2018	0.11	13.9	1495.0	
	7/5/2018	0.27	20.5	1515.5	
	7/9/2018	0.28	12.0	1527.5	
	7/19/2018	0.16	26.5	1554.0	
	7/25/2018	0.18	14.5	1568.5	
	8/1/2018	2.00	16.0	1584.5	pump filter clogged
	8/9/2018	0.18	34.0	1618.5	
	8/16/2018	0.22	19.0	1637.5	
	8/23/2018	0.11	21.0	1658.5	
	8/30/2018	3.71	1.0	1659.5	
	9/5/2018	3.17	10.0	1669.5	
	9/14/2018	0.16	30.2	1699.7	
	9/21/2018	0.27	14.3	1714.0	
	9/25/2018	0.11	9.5	1723.5	
	10/4/2018	0.34	24.0	1747.5	
	10/10/2018	0.05	15.6	1763.1	
	10/17/2018	0.12	14.9	1778.0	
	10/23/2018	2.98	13.0	1791.0	
	11/1/2018	0.28	27.5	1818.5	
	11/8/2018	0.29	17.4	1835.9	

LNAPL Skimming Underway

Table 2

**LNAPL Removal Summary**  
**IMTT, Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Well ID	Measurement Date	Measured In-Well LNAPL Thickness (feet)	LNAPL Removed Between Measurements (gallons)	Cumulative Total LNAPL Removal (gallons)	Comments
	Short-term Skimming Test			269.8	
	4/27/2017	3.05	--	269.8	
	5/2/2017	0.15	119.0	388.8	Installed LNAPL Skimmer
	5/10/2017	1.41	75.0	463.8	
	5/17/2017	0.16	52.0	515.8	
	5/26/2017	0.19	60.0	575.8	
	6/1/2017	0.19	21.0	596.8	
	6/8/2017	0.14	25.0	621.8	
	6/15/2017	0.17	15.9	637.7	
	6/22/2017	0.15	25.0	662.7	
	6/26/2017	0.15	13.1	675.8	
	6/30/2017	0.89	53.5	729.3	
	7/7/2017	0.90	9.5	738.8	
	7/12/2017	0.08	17.8	756.6	
	7/19/2017	0.09	10.2	766.8	
	7/26/2017	0.02	43.9	810.7	
	8/2/2017	0.21	8.1	818.8	
	8/9/2017	0.15	3.0	821.8	
	8/17/2017	0.03	2.0	823.8	
	8/22/2017	0.10	9.0	832.8	
	8/30/2017	0.14	5.7	838.5	
	9/6/2017	0.14	5.3	843.8	Shutdown due to Hurricane Irma
	9/21/2017	2.02	0.0	843.8	LNAPL skimmer restarted
	9/22/2017	0.06	12.3	856.1	
	9/29/2017	0.16	10.4	866.5	
	10/6/2017	1.31	23.7	890.2	System off upon arrival
	10/12/2017	0.17	10.0	900.2	Estimated
	10/19/2017	0.12	2.1	902.3	
	11/2/2017	0.24	9.2	911.5	System off upon arrival
	11/8/2017	0.23	0.0	911.5	
	11/15/2017	0.63	0.0	911.5	System malfunction
	11/22/2017	0.26	10.0	921.5	
	11/30/2017	0.27	10.0	931.5	Estimated
	12/6/2017	0.25	9.8	941.3	
	12/13/2017	1.96	6.8	948.1	
	12/21/2017	1.86	12.4	960.5	
	12/28/2017	0.23	7.8	968.3	
	1/5/2018	0.24	0.0	968.3	
	1/12/2018	0.22	35.5	1003.8	
	1/19/2018	0.25	5.5	1009.3	
	1/26/2018	0.06	11.2	1020.5	
	2/1/2018	0.24	6.2	1026.7	
	2/7/2018	0.30	14.0	1040.7	
	2/15/2018	0.41	31.0	1071.7	
	2/22/2018	1.76	31.0	1102.7	tank full, system off
	2/28/2018	2.32	0.0	1102.7	
	3/8/2018	0.22	14.0	1116.7	
	3/15/2018	0.21	14.0	1130.7	
	3/22/2018	0.21	17.0	1147.7	
	3/29/2018	0.18	14.0	1161.7	
	4/6/2018	0.25	13.0	1174.7	
	4/12/2018	0.26	14.0	1188.7	
	4/18/2018	0.25	23.0	1211.7	
	4/27/2018	0.24	12.0	1223.7	
	5/3/2018	0.18	7.0	1230.7	
	5/9/2018	0.20	10.5	1241.2	
	5/17/2018	0.18	13.5	1254.7	System off due to malfunction
	6/7/2018	0.16	0.5	1255.2	
	6/14/2018	0.16	0.5	1255.7	
	6/22/2018	0.19	2.5	1258.2	
	6/28/2018	0.28	0.0	1258.2	
	7/5/2018	0.24	3.1	1261.3	
	7/9/2018	0.11	3.0	1264.3	
	7/19/2018	0.32	2.9	1267.2	
	7/25/2018	1.16	0.0	1267.2	System off
	8/1/2018	0.18	8.0	1275.2	
	8/9/2018	0.15	1.0	1276.2	
	8/16/2018	0.19	2.0	1278.2	
	8/23/2018	0.18	7.0	1285.2	
	8/30/2018	0.18	8.5	1293.7	
	9/5/2018	0.22	2.5	1296.2	
	9/14/2018	0.20	3.2	1299.4	
	9/21/2018	0.22	2.3	1301.7	
	9/25/2018	0.15	6.2	1307.9	
	10/4/2018	0.28	1.4	1309.3	
	10/10/2018	0.25	1.5	1310.8	
	10/17/2018	0.26	1.2	1312.0	
	10/23/2018	0.13	1.0	1313.0	
	11/1/2018	0.22	1.7	1314.7	
	11/8/2018	0.17	0.6	1315.3	
LNAPL Skimming Underway					

Table 2

**LNAPL Removal Summary**  
**IMTT, Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Well ID	Measurement Date	Measured In-Well LNAPL Thickness (feet)	LNAPL Removed Between Measurements (gallons)	Cumulative Total LNAPL Removal (gallons)	Comments
AW-22	Short-term Skimming Test			256.0	
	9/21/2017	3.76	--	256.0	Installed LNAPL Skimmer
	9/22/2017	0.06	2.3	258.3	
	9/29/2017	0.03	3.5	261.8	
	10/6/2017	0.09	1.5	263.3	
	10/12/2017	0.18	2.0	265.3	Estimated
	10/19/2017	0.12	0.5	265.8	
	11/2/2017	0.10	4.5	270.3	
	11/8/2017	0.22	0.0	270.3	
	11/15/2017	0.51	0.0	270.3	Batteries dead, system restarted
	11/22/2017	0.20	3.0	273.3	
	11/30/2017	0.19	2.0	275.3	Estimated
	6/22/2018	0.23	8.9	284.2	First intermittent skimming event initiated
	6/28/2018	0.02	21.1	305.3	
	7/5/2018	0.21	0.0	305.3	
	7/9/2018	0.10	0.0	305.3	
	7/19/2018	0.05	3.5	308.8	
	7/25/2018	0.06	3.3	312.1	
	8/1/2018	0.15	4.0	316.1	
	8/9/2018	0.07	1.5	317.6	
	8/16/2018	0.16	0.5	318.1	
	8/23/2018	0.05	2.5	320.6	
	8/30/2018	0.02	2.0	322.6	
	LNAPL Skimming Completed				
AW-12	Short-term Skimming Test			30.5	
	11/30/2017	6.54	--	30.5	Installed LNAPL Skimmer
	12/6/2017	0.28	17.0	47.5	
	12/13/2017	0.15	4.0	51.5	
	12/21/2017	0.15	7.0	58.5	
	12/28/2017	0.23	2.0	60.5	
	1/5/2018	0.10	0.0	60.5	
	1/12/2018	0.52	23.0	83.5	
	1/19/2018	0.17	7.0	90.5	
	1/26/2018	0.72	0.0	90.5	tank full of water
	2/1/2018	0.22	0.0	90.5	
	2/7/2018	0.03	6.0	96.5	
	2/15/2018	0.16	1.0	97.5	
	2/22/2018	0.02	14.0	111.5	tank full of water
	2/28/2018	0.19	0.0	111.5	
	6/22/2018	2.00	4.3	115.8	First intermittent skimming event initiated
	6/28/2018	0.23	8.7	124.5	
	7/5/2018	0.04	3.0	127.5	
	7/9/2018	0.15	4.7	132.2	
	7/19/2018	0.31	48.9	181.1	
	7/25/2018	0.23	0.0	181.1	
	8/1/2018	0.05	9.0	190.1	
	LNAPL Skimming Concluded				
AW-68	Short-term Skimming Test			13.2	
	11/30/2017	6.34	--	13.2	Installed LNAPL Skimmer
	12/6/2017	0.38	16.0	29.2	
	12/13/2017	0.25	26.0	55.2	
	12/21/2017	0.02	40.0	95.2	
	12/28/2017	0.07	87.0	182.2	
	1/5/2018	0.02	8.0	190.2	
	1/12/2018	0.06	0.0	190.2	
	1/19/2018	0.35	0.0	190.2	
	1/26/2018	1.17	3.0	193.2	
	2/1/2018	0.20	0.0	193.2	
	2/7/2018	0.40	1.0	194.2	
	2/15/2018	0.07	27.0	221.2	
	2/22/2018	0.31	0.0	221.2	
	2/28/2018	0.19	3.0	224.2	
	3/7/2018	0.29	0.5	224.7	
	8/30/2018	0.13	4.0	228.7	
	9/5/2018	0.12	0.0	228.7	
	9/14/2018	0.26	0.1	228.8	
	9/21/2018	0.15	0.0	228.8	
	9/25/2018	0.09	3.0	231.8	
	10/4/2018	0.26	2.0	233.8	
	10/10/2018	0.26	3.0	236.8	
	10/16/2018	0.03	1.0	237.8	
	10/23/2018	0.16	0.0	237.8	
	11/1/2018	0.24	0.7	238.5	
	11/8/2018	0.10	0.0	238.5	
	LNAPL Skimming Concluded				

Table 2

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**LNAPL Removal Summary**  
**IMTT, Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Well ID	Measurement Date	Measured In-Well LNAPL Thickness (feet)	LNAPL Removed Between Measurements (gallons)	Cumulative Total LNAPL Removal (gallons)	Comments
AW-10	Short-term Skimming Test			101.4	
	1/9/2017	4.12	--	101.4	Installed LNAPL Skimmer
	1/20/2017	0.01	60.8	162.2	
	1/23/2017	0.68	0.0	162.2	LNAPL skimmer shutdown due to full tank
	1/26/2017	0.18	5.0	167.2	Estimated
	1/31/2017	0.21	36.5	203.7	
	2/7/2017	0.08	10.1	213.8	
	2/13/2017	0.40	2.9	216.6	
	2/14/2017	0.25	0.0	216.6	
	2/23/2017	0.25	7.5	224.1	
	3/3/2017	0.31	2.5	226.6	
	3/7/2017	0.29	5.0	231.6	
	3/10/2017	0.43	2.6	234.2	
	3/16/2017	0.26	6.1	240.3	
	3/23/2017	0.32	0.0	240.3	
	3/31/2017	0.34	6.0	246.3	Estimated
	4/3/2017	0.20	1.8	248.1	
	4/13/2017	0.15	7.2	255.3	
	4/18/2017	0.18	2.7	258.0	
	4/27/2017	0.16	4.3	262.3	LNAPL Skimmer removed for relocation
	3/7/2018	3.21	0.0	262.3	First intermittent skimming event initiated
	3/7/2018	0.83	5.5	267.8	
	3/8/2018	0.36	1.5	269.3	
	3/15/2018	1.60	2.0	271.3	
	3/22/2018	0.63	37.0	308.3	
	3/29/2018	0.24	6.0	314.3	
	4/6/2018	0.31	1.0	315.3	
	4/12/2018	0.24	1.3	316.6	
	4/18/2018	0.22	4.7	321.3	
	4/27/2018	0.30	2.5	323.8	
	5/3/2018	0.28	1.0	324.8	
	5/9/2018	0.21	2.5	327.3	
	5/17/2018	0.27	5.0	332.3	
	5/25/2018	0.22	3.0	335.3	
	5/31/2018	0.28	2.0	337.3	
	6/7/2018	0.30	1.8	339.1	
	6/14/2018	1.47	0.0	339.1	
AW-54	LNAPL Skimming Underway				
	Short-term Skimming Test			200.0	
	6/20/2017	10.42	--	200.0	Installed LNAPL Skimmer
	6/20/2017	7.40	6.0	206.0	
	6/22/2017	8.52	12.0	218.0	
	6/26/2017	10.60	0.0	218.0	Skimmer inlet clogged on arrival
	6/30/2017	5.75	60.5	278.5	
	7/7/2017	--	0.0	278.5	Well area flooded
	7/12/2017	0.25	34.0	312.5	
	7/19/2017	0.23	0.0	312.5	
	7/26/2017	0.42	2.5	315.0	
	8/2/2017	0.31	1.5	316.5	
	8/9/2017	0.20	2.0	318.5	
	8/17/2017	0.27	1.0	319.5	
	8/22/2017	0.17	0.0	319.5	Skimming test concluded
	3/7/2018	10.15	0.0	319.5	First intermittent skimming event initiated
	3/7/2018	5.46	5.0	324.5	
	3/8/2018	0.11	6.5	331.0	
	3/15/2018	0.21	0.0	331.0	
	3/22/2018	0.16	2.0	333.0	
	3/29/2018	0.34	0.0	333.0	
	4/6/2018	0.16	0.0	333.0	
	4/12/2018	0.54	0.0	333.0	
	4/18/2018	0.20	0.0	333.0	
	4/27/2018	0.16	0.0	333.0	
	5/3/2018	0.21	1.0	334.0	
	5/9/2018	0.20	0.0	334.0	
	5/17/2018	0.19	2.0	336.0	
	5/25/2018	0.23	1.3	337.3	
	5/31/2018	-	0.0	337.3	
	6/7/2018	0.06	0.0	337.3	
	6/14/2018	0.17	3.2	340.5	
AW-5	LNAPL Skimming Underway			0.0	
	Short-term Skimming Test			0.0	
	9/22/2016	2.55	--	0.0	Installed LNAPL Skimmer
	9/28/2016	1.94	29.0	29.0	
	10/5/2016	0.86	17.3	46.3	
	11/16/2016	1.58	0.0	46.3	Skimmer inlet clogged on arrival
	11/22/2016	0.66	50.1	96.4	
	11/29/2016	0.56	4.9	101.3	Well area flooded
	1/19/2017	0.84	0.0	101.3	
	1/23/2017	0.24	11.7	113.0	
	1/26/2017	0.08	10.0	123.0	
	1/31/2017	0.03	4.5	127.5	
	2/7/2017	0.67	0.5	128.0	
	2/13/2017	0.13	0.0	128.0	
	2/14/2017	1.07	0.0	128.0	Skimming test concluded
	2/23/2017	0.65	0.0	128.0	First intermittent skimming event initiated
	8/30/2018	1.51	0.0	128.0	
	8/30/2018	0.27	1.3	129.3	
	9/5/2018	0.11	1.7	131.0	
	9/14/2018	0.02	0.0	131.0	
	9/21/2018	0.08	0.0	131.0	
	9/25/2018	0.02	0.0	131.0	
	10/4/2018	0.15	0.0	131.0	
	10/10/2018	0.12	0.0	131.0	
	LNAPL Skimming Underway				

## Notes:

1. Long-term skimming was initiated in AW-9 and AW-49 on September 14, 2016.
2. Long-term skimming was initiated in AW-11 on January 19, 2017.
3. Long-term skimming was initiated in AW-10 on January 19, 2017 and halted on April 27, 2017.
4. Long-term skimming was initiated in AW-56 on February 23, 2017.
5. Long-term skimming was initiated in AW-82 on April 27, 2017.
6. Long-term skimming was initiated in AW-18 on June 19, 2017 and halted on August 2, 2017.
7. Long-term skimming was initiated in AW-54 on June 20, 2017 and halted on August 22, 2017.
8. Long-term skimming was initiated in AW-6 on August 2, 2017 and halted on September 6, 2017.
9. Long-term skimming was initiated in AW-74 on August 30, 2017 and halted on November 30, 2017.
10. Long-term skimming was initiated in AW-22 on September 21, 2017 and halted on November 30, 2017.
11. Long-term skimming was initiated in AW-12 and AW-68 on November 30, 2017.
12. Long-term skimming in AW-12 was halted on February 22, 2018.
13. Long-term skimming was initiated in AW-10 and AW-54 on March 7, 2018.
14. Includes observations through April 27, 2018.

**Table 3**

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**Milestone Schedule**  
**December 1, 2018 to June 1, 2019**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

<b>Milestone</b>	<b>Timeline</b>
Quarterly Groundwater Monitoring	January and April 2019
Continued Long-Duration and Intermittent LNAPL Skimming Program	Ongoing
Weekly Observation and Residual LNAPL Recovery on the River Side of the Polywall	Ongoing
Submittal of Semi-Annual Progress Report	June 1, 2019

**Table 4**

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**Summary of Observed Reduction in In-Well LNAPL Thicknesses**  
**IMTT Epic LLC - Sixth Semi-Annual VRP Progress Report**  
**Savannah, Chatham County, Georgia**  
**VRP #1440101197**

Well ID	Maximum In-Well LNAPL Thickness Since 2017	Maximum Observed LNAPL Thickness During Reporting Period	% Reduction Since 2017
AW-5	1.70	1.46	14%
AW-6	2.17	1.74	20%
AW-8	0.50	0.50	0%
AW-9	3.43	2.47*	28%
AW-10	4.12	3.78	8%
AW-11	3.89	3.89*	0%
AW-12	8.64	1.90	78%
AW-15	1.21	1.16	4%
AW-18	1.71	1.31	23%
AW-22	3.76	2.89	23%
AW-32	0.13	0.00	100%
AW-38	0.15	0.02	87%
AW-49	2.33	2.33*	0%
AW-51	1.52	1.23	19%
AW-52	3.12	3.00	4%
AW-53	0.57	0.19	67%
AW-54	13.75	11.27	18%
AW-56	5.22	5.22*	0%
AW-57	0.89	0.83	7%
AW-62	0.04	0.00	100%
AW-65	2.20	1.69	23%
AW-68	8.22	2.49	70%
AW-74	3.79	2.57	32%
AW-82	2.58	2.58*	0%

**Average**      30%

\* - Observations reported for wells AW-9, AW-11, AW-49, AW-56, and AW-82 are the maximum observed since 2017 as these wells have been undergoing long-term skimming. Based on the volume of LNAPL removed from these wells via skimming, it would be expected that some reduction in LNAPL thickness would have occurred

# Appendices

## **Appendix A**

### **LNAPL Transmissivity Evaluation Summary Tables and Charts for Long-Term Skimming Wells**

## Appendix A

**AW-9 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium	--			--	--	--		10.83	14.72	3.89	--	0.57	--	--	--	--	
AW-9 Short Term Test	6/8/2016 14:00	--			--	--	--		10.68	14.55	3.87	--	--	--	--	--	--	
	6/9/2016 17:35	1.15		1.07	1.07	8.55	8.55	8.55	9.60	12.00	2.40	-1.23	0.57	8.0	1.07	1.4		
	6/10/2016 7:00	0.56		0.56	1.63	9.60	1.05	9.60	9.60	12.50	2.90	-1.23	0.57	1.9	0.25	0.3		
	6/13/2016 11:00	2.96		2.91	4.74	21.34	11.74	21.34	10.27	12.60	2.33	-0.56	0.57	4.0	0.54	0.7		
	6/22/2016 16:30	9.23		9.13	13.87	49.25	27.91	49.25	10.40	12.20	1.80	-0.43	0.57	3.1	0.41	0.5		
	6/27/2016 14:27	4.91		0.00	13.87	49.25	0.00	49.25	10.06	14.51	4.45	-0.77	0.57				0.6	
AW-9 Long Term Test	9/14/2016 13:10	--		--	--	--	--		10.05	13.98	3.93	--		--	--	--	--	
	9/14/2016 16:50	0.15		0.15	0.15	9.00	9.0	58.3	10.65	12.35	1.70	-0.18	0.57	58.9	7.87	10.1		
	9/15/2016 8:05	0.64	0.00	0.64	0.64	14.70	5.7	64.0	10.35	10.51	0.16	-0.48	0.57	9.0	1.20	1.5		
	9/15/2016 8:55	0.03	0.03	0.03	0.67	14.90	0.2	64.2	10.31	10.51	0.20	-0.52	0.57	5.8	0.77	1.0		
	9/15/2016 11:50	0.12	0.16	0.12	0.79	15.30	0.4	64.6	10.26	10.50	0.24	-0.57	0.57	3.3	0.44	0.6		
	9/21/2016 11:52	6.00	6.16	6.00	6.79	31.80	16.5	81.1	10.75	11.10	0.35	-0.08	0.57	2.7	0.37	0.5		
	9/22/2016 9:45	0.91	7.07	0.90	7.70	33.10	1.3	82.4	11.15	11.40	0.25	0.32	0.32	1.4	0.19	0.4		
	9/28/2016 8:15	5.94	13.01	5.94	13.63	52.10	19.0	101.4	10.46	10.72	0.26	-0.37	0.57	3.2	0.43	0.5		
	10/5/2016 14:15	7.25	20.26	6.32	19.96	71.10	19.0	120.4	10.19	10.42	0.23	-0.64	0.57	3.0	0.40	0.5		
	<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																	
	10/13/2016 13:50	7.98	28.24	0.00	19.96	0.00	0.0	120.4	8.83	12.89	4.06	--		--	--	--		
	10/20/2016 12:35	6.95	35.19	6.95	26.91	97.00	97.0	217.4	9.53	9.64	0.11	-1.30	0.57	6.5	0.87	1.1		
	<b>END OF TEST INTERVAL - SHUTDOWN DUE TO FULL TANK</b>																	
	10/28/2016 11:24	--	43.14	--	--	--	--	217.4	9.33	12.73	3.40	--		--	--	--		
	11/4/2016 11:45	7.01	50.15	7.00	7.00	2.00	2.0	219.4	9.85	13.30	3.45	-0.98	0.57	0.3	0.04	0.0		
	<b>END OF TEST INTERVAL - DUE TO EQUIPMENT MALFUNCTION</b>																	
	11/15/2016 16:42	--	61.36	--	--	--	--	219.4	10.31	13.20	2.89	--		--	--	--		
	11/22/2016 12:07	6.81	68.17	6.40	6.40	4.50	4.5	223.9	11.27	11.54	0.27	0.44	0.57	0.7	0.09	0.1		
	11/29/2016 15:10	7.13	75.30	7.12	13.53	31.00	26.5	250.4	11.10	11.44	0.34	0.27	0.57	3.7	0.50	0.6		
	<b>END OF TEST INTERVAL - DUE TO EQUIPMENT MALFUNCTION</b>																	
	12/5/2016 12:30	5.89	81.18	--	--	--	2.0	252.4	10.38	13.21	2.83	--		--	--	--		
	12/7/2016 13:10	2.03	83.21	2.00	2.00	48.6	46.6	299.0	10.74	10.94	0.20	-0.09	0.57	14.0	1.87	2.4		
	12/14/2016 9:38	6.85	90.06	6.14	8.14	62.60	14.0	313.0	10.65	11.60	0.95	-0.18	0.57	2.3	0.30	0.4		
	12/21/2016 9:10	6.98	97.05	6.98	15.12	84.28	21.7	334.6	11.02	11.35	0.33	0.19	0.57	3.1	0.42	0.5		
	12/27/2016 12:25	6.14	103.18	6.13	21.25	100.95	16.7	351.3	10.86	11.14	0.28	0.03	0.57	2.7	0.36	0.5		
	1/4/2017 12:50	8.02	111.20	8.02	29.27	154.30	53.4	404.7	11.21	11.29	0.08	0.38	0.57	6.7	0.89	1.1		
	1/9/2017 11:28	4.94	116.14	4.94	34.20	179.10	24.8	429.5	11.26	11.50	0.24	0.43	0.57	5.0	0.67	0.9		
	1/19/2017 13:58	10.10	126.25	9.83	44.03	218.10	39.0	468.5	11.24	11.36	0.12	0.41	0.57	4.0	0.53	0.7		
	1/26/2017 13:09	6.97	133.21	6.96	50.99	248.10	30.0	498.5	10.84	11.12	0.28	0.01	0.57	4.3	0.58	0.7		
	1/31/2017 12:45	4.98	138.19	4.98	55.98	272.70	24.6	523.1	10.82	11.00	0.18	-0.01	0.57	4.9	0.66	0.8		
	2/7/2017 12:49	7.00	145.20	7.00	62.98	298.10	25.4	548.5	11.27	11.50	0.23	0.44	0.57	3.6	0.48	0.6		
	2/13/2017 14:36	6.07	151.27	6.07	69.05	320.07	22.0	570.4	11.20	11.50	0.30	0.37	0.57	3.6	0.48	0.6		
	2/14/2017 14:19	0.99	152.26	0.99	70.04	324.27	4.2	574.6	10.92	11.24	0.32	0.09	0.57	4.3	0.57	0.7		
	2/23/2017 11:15	8.87	161.13	8.68	78.72	358.39												

## Appendix A

**AW-9 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

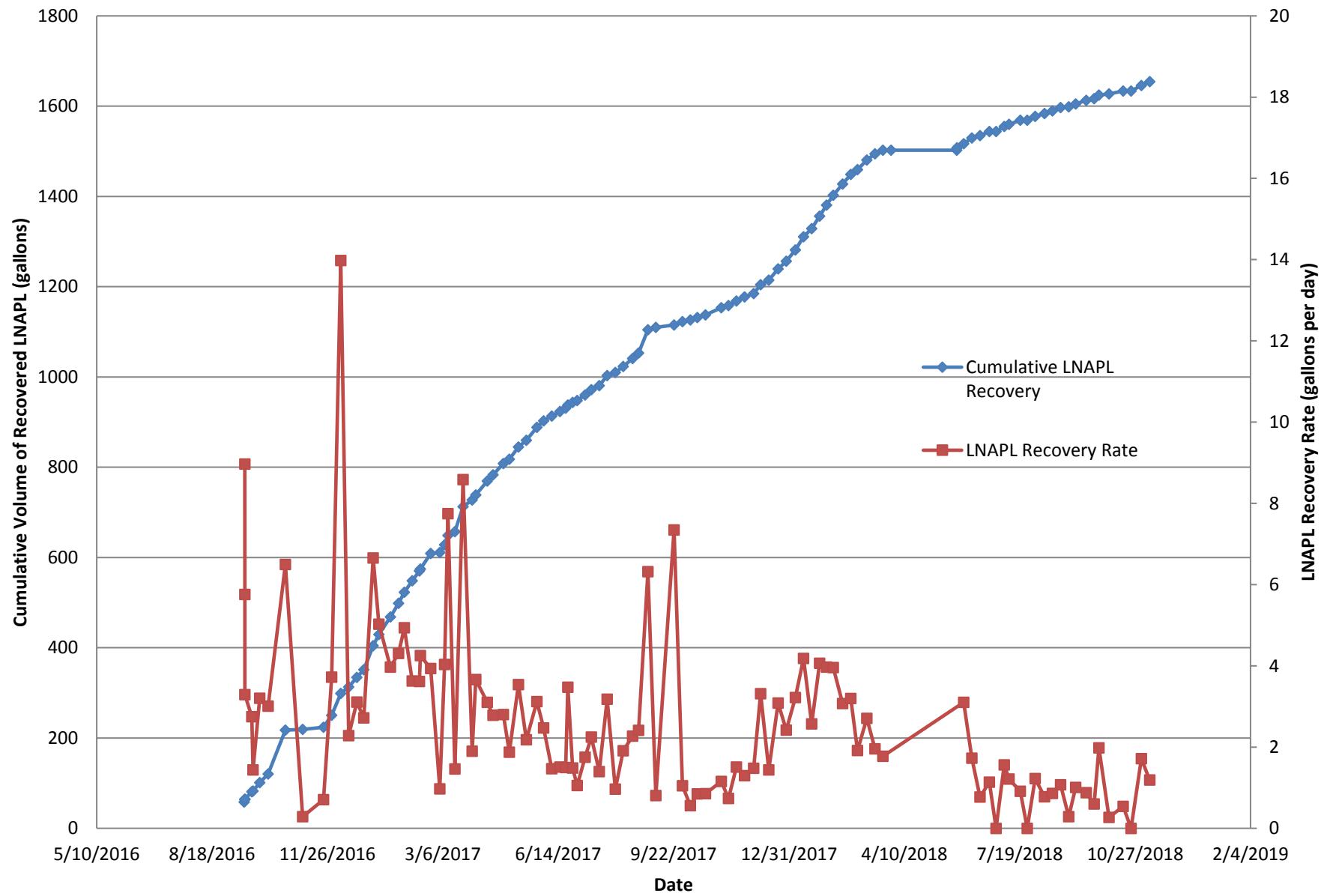
Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-9 Long Term Test	3/31/2017 8:32	7.91	197.02	7.91	99.44	477.17	15.0	727.5	11.57	11.79	0.22	0.74		0.57	1.9	0.25	0.3	
	4/3/2017 10:00	3.06	200.08	3.06	102.50	488.37	11.2	738.7	11.55	11.79	0.24	0.72		0.57	3.7	0.49	0.6	
	4/13/2017 11:46	10.07	210.15	9.80	112.29	518.77	30.4	769.1	11.14	11.32	0.18	0.31		0.57	3.1	0.41	0.5	
	4/18/2017 11:41	5.00	215.15	4.99	117.29	532.67	13.9	783.0	11.65	11.81	0.16	0.82		0.57	2.8	0.37	0.5	
	4/27/2017 10:55	8.97	224.12	8.97	126.26	557.77	25.1	808.1	11.09	11.20	0.11	0.26		0.57	2.8	0.37	0.5	
	5/2/2017 12:39	5.07	229.19	5.07	131.32	567.27	9.5	817.6	11.74	11.85	0.11	0.91		0.57	1.9	0.25	0.3	
	5/10/2017 10:40	7.92	237.11	7.64	138.96	594.27	27.0	844.6	11.49	11.60	0.11	0.66		0.57	3.5	0.47	0.6	
	5/17/2017 7:39	6.87	243.98	6.87	145.83	609.27	15.0	859.6	11.80	11.90	0.10	0.97		0.57	2.2	0.29	0.4	
	5/26/2017 10:49	9.13	253.11	9.13	154.96	637.77	28.5	888.1	11.42	11.50	0.08	0.59		0.57	3.1	0.42	0.5	
	6/1/2017 7:55	5.88	258.99	5.88	160.84	652.27	14.5	902.6	11.33	11.58	0.25	0.50		0.57	2.5	0.33	0.4	
	6/8/2017 11:50	7.16	266.16	7.16	168.00	662.77	10.5	913.1	10.86	11.06	0.20	0.03		0.57	1.5	0.20	0.3	
	6/15/2017 11:03	6.97	273.12	6.69	174.69	672.87	10.1	923.2	11.60	11.76	0.16	0.77		0.57	1.5	0.20	0.3	
	6/20/2017 9:48	4.95	278.07	4.95	179.64	680.27	7.4	930.6	11.34	11.51	0.17	0.51		0.57	1.5	0.20	0.3	
	6/22/2017 10:10	2.02	280.09	2.02	181.65	687.27	7.0	937.6	11.09	11.27	0.18	0.26		0.57	3.5	0.46	0.6	
	6/26/2017 11:51	4.07	284.16	4.05	185.70	693.27	6.0	943.6	--	--	0.15	--		0.57	1.5	0.20	0.3	
	6/30/2017 11:38	3.99	288.15	3.99	189.68	697.47	4.2	947.8	11.34	11.55	0.21	0.51		0.57	1.1	0.14	0.2	
	7/7/2017 8:09	6.85	295.00	6.85	196.53	709.47	12.0	959.8	11.03	11.16	0.13	0.20		0.57	1.8	0.23	0.3	
	7/12/2017 14:15	5.25	300.26	5.25	201.78	721.27	11.8	971.6	10.85	11.01	0.16	0.02		0.57	2.2	0.30	0.4	
	7/19/2017 11:14	6.87	307.13	6.59	208.37	730.47	9.2	980.8	11.10	11.29	0.19	0.27		0.57	1.4	0.19	0.2	
	7/26/2017 10:55	6.99	314.12	6.98	215.36	752.67	22.2	1003.0	10.90	10.94	0.04	0.07		0.57	3.2	0.43	0.5	
	8/2/2017 11:48	7.04	321.15	7.03	222.39	759.47	6.8	1009.8	10.57	10.80	0.23	-0.26		0.57	1.0	0.13	0.2	
	8/9/2017 9:51	6.92	328.07	6.91	229.30	772.67	13.2	1023.0	10.65	10.72	0.07	-0.18		0.57	1.9	0.26	0.3	
	8/17/2017 8:33	7.95	336.02	7.94	237.24	790.67	18.0	1041.0	10.26	10.48	0.22	-0.57		0.57	2.3	0.30	0.4	
	8/22/2017 12:50	5.18	341.20	4.89	242.14	802.47	11.8	1052.8	10.20	10.38	0.18	-0.63		0.57	2.4	0.32	0.4	
	8/30/2017 17:13	8.18	349.38	8.18	250.32	854.17	51.7	1104.5	10.27	10.35	0.08	-0.56		0.57	6.3	0.84	1.1	
	9/6/2017 13:35	6.85	356.23	6.83	257.15	859.67	5.5	1110.0	10.36	10.46	0.10	-0.47		0.57	0.8	0.11	0.1	0.5
<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																		
9/21/2017 15:37	--	371.31	--	--	--	--	1110.0	9.16	12.59	3.43	--			--	--	--	--	
9/22/2017 7:57	0.68	371.99	0.68	257.83	5.00	5.0	1115.0	10.27	10.47	0.20	-0.56		0.57	7.3	0.98	1.3		
9/29/2017 13:52	7.25	379.24	7.24	265.07	12.60	7.6	1122.6	10.31	10.55	0.24	-0.52		0.57	1.0	0.14	0.2		
10/6/2017 13:49	7.00	386.24	6.99	272.06	16.50	3.9	1126.5	9.95	10.16	0.21	-0.88		0.57	0.6	0.07	0.1		
10/12/2017 11:24	5.90	392.14	5.90	277.96	21.50	5.0	1131.5	10.36	10.97	0.61	-0.47		0.57	0.8	0.11	0.1		
10/19/2017 12:10	7.03	399.17	7.03	284.99	27.50	6.0	1137.5	9.81	10.04	0.23	-1.02		0.57	0.9	0.11	0.1		
11/2/2017 8:59	13.87	413.04	13.87	298.86	43.50	16.0	1153.5	10.81	11.04	0.23	-0.02		0.57	1.2	0.15	0.2		
11/8/2017 12:15	6.14	419.17	6.14	304.99	48.00	4.5	1158.0	10.78	11.02	0.24	-0.05		0.57	0.7	0.10	0.1		
11/15/2017 11:34	6.97	426.15	6.97	311.96	58.50	10.5	1168.5	10.65	10.87	0.22	-0.18		0.57	1.5	0.20	0.3		
11/22/2017 10:23	6.95	433.10	6.95	318.91	67.50	9.0	1177.5	11.18	11.45	0.27	0.35		0.57	1.3	0.17	0.2		
11/30/2017 11:09	8.03	441.13	4.74	323.65	74.50	7.0	1184.5	10.85	13.00	2.15	0.02		0.57	1.5	0.20	0.3		
12/6/2017 12:01	6.04	447.16	6.03	329.69	94.50	20.0	1204.5	10.69	10.92	0.23	-0							

## Appendix A

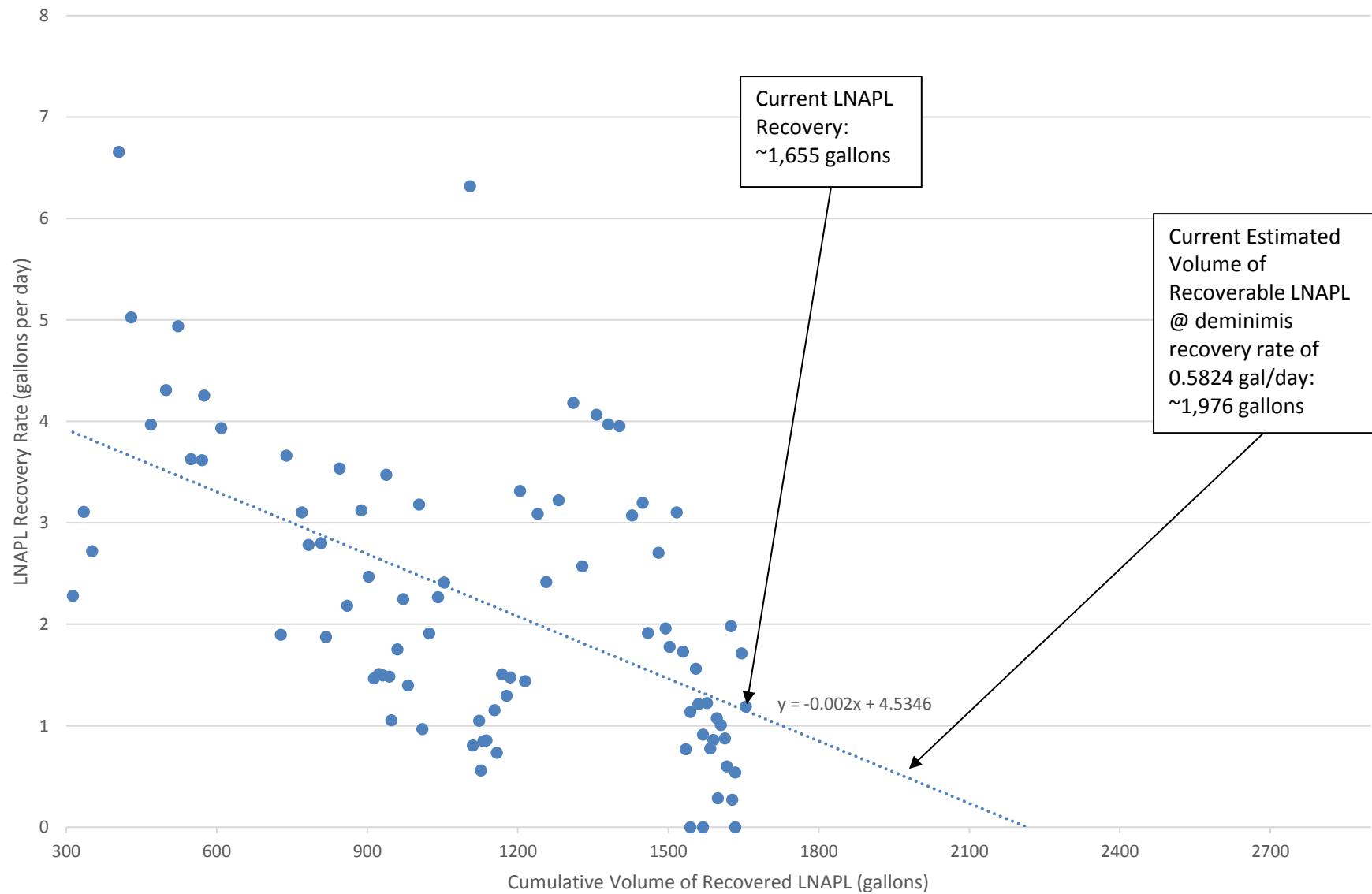
**AW-9 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-9 Long Term Test	1/5/2018 14:23	8.01	477.26	7.73	359.50	171.40	24.9	1281.4	11.03	11.31	0.28	0.20		0.57	3.2	0.43	0.6	
	1/12/2018 14:11	6.99	484.25	6.96	366.46	200.50	29.1	1310.5	11.52	11.81	0.29	0.69		0.57	4.2	0.56	0.7	
	1/19/2018 14:15	7.00	491.26	7.00	373.46	218.50	18.0	1328.5	11.23	11.48	0.25	0.40		0.57	2.6	0.34	0.4	
	1/26/2018 11:32	6.89	498.14	6.89	380.35	246.50	28.0	1356.5	11.94	12.25	0.31	1.11		0.57	4.1	0.54	0.7	
	2/1/2018 12:41	6.05	504.19	6.04	386.39	270.50	24.0	1380.5	10.08	10.37	0.29	-0.75		0.57	4.0	0.53	0.7	
	2/7/2018 8:48	5.84	510.03	5.56	391.96	292.50	22.0	1402.5	11.67	12.04	0.37	0.84		0.57	4.0	0.53	0.7	
	2/15/2018 12:08	8.14	518.17	8.13	400.09	317.50	25.0	1427.5	11.11	11.33	0.22	0.28		0.57	3.1	0.41	0.5	
	2/22/2018 14:19	7.09	525.26	6.57	406.66	338.50	21.0	1448.5	11.18	11.44	0.26	0.35		0.57	3.2	0.43	0.5	
	2/28/2018 8:10	5.74	531.00	5.74	412.40	349.50	11.0	1459.5	10.83	11.04	0.21	0.00		0.57	1.9	0.26	0.3	
	3/8/2018 9:16	8.05	539.05	7.77	420.17	370.50	21.0	1480.5	11.41	11.77	0.36	0.58		0.57	2.7	0.36	0.5	
	3/15/2018 13:45	7.19	546.24	7.14	427.31	384.50	14.0	1494.5	11.39	11.59	0.20	0.56		0.57	2.0	0.26	0.3	
	3/22/2018 11:12	6.89	553.13	4.50	431.82	392.50	8.0	1502.5	11.60	13.10	1.50	0.77		0.57	1.8	0.24	0.3	
	3/29/2018 11:05	7.00	560.13	0.00	431.82	392.50	0.0	1502.5	10.59	13.01	2.42	-0.24		0.57	--	--	--	0.44
<b>END OF TEST INTERVAL - SHUTDOWN DUE TO EQUIPMENT REPAIR</b>																		
5/25/2018 12:00	--	617.16	--	431.82	392.50	0.0	1502.5	10.94	13.39	2.45	0.11		0.57	--	--	--		
5/25/2018 13:40	0.07	617.23	0.07	431.88	397.50	5.0	1507.5	11.73	12.48	0.75	0.90		0.57	75.0	10.03	12.9		
5/31/2018 9:46	5.84	623.07	3.00	434.88	406.80	9.3	1516.8	10.60	12.54	1.94	-0.23		0.57	3.1	0.41	0.5		
6/7/2018 13:57	7.17	630.24	7.17	442.05	419.20	12.4	1529.2	10.95	11.16	0.21	0.12		0.57	1.7	0.23	0.3		
6/14/2018 11:40	6.90	637.15	6.90	448.95	424.50	5.3	1534.5	10.53	10.72	0.19	-0.30		0.57	0.8	0.10	0.1		
6/22/2018 13:57	8.10	645.24	8.10	457.05	433.70	9.2	1543.7	11.30	11.52	0.22	0.47		0.57	1.1	0.15	0.2		
6/28/2018 10:08	5.84	651.09	5.63	462.68	433.70	0.0	1543.7	10.71	10.94	0.23	-0.12		0.57	0.0	0.00	0.0		
7/5/2018 11:20	7.05	658.14	7.04	469.72	444.70	11.0	1554.7	11.09	11.21	0.12	0.26		0.57	1.6	0.21	0.3		
7/9/2018 14:22	4.13	662.26	4.13	473.85	449.70	5.0	1559.7	11.09	11.25	0.16	0.26		0.57	1.2	0.16	0.2		
7/19/2018 11:20	9.87	672.14	9.87	483.72	458.70	9.0	1568.7	10.96	11.20	0.24	0.13		0.57	0.9	0.12	0.2		
7/25/2018 11:18	6.00	678.13	0.96	484.68	458.70	0.0	1568.7	10.47	10.68	0.21	-0.36		0.57	0.0	0.00	0.0		
8/1/2018 10:17	6.96	685.09	6.95	491.64	467.20	8.5	1577.2	10.95	11.19	0.24	0.12		0.57	1.2	0.16	0.2		
8/9/2018 10:27	8.01	693.10	8.00	499.64	473.40	6.2	1583.4	10.50	10.72	0.22	-0.33		0.57	0.8	0.10	0.1		
8/16/2018 9:47	6.97	700.07	6.97	506.61	479.40	6.0	1589.4	11.19	11.43	0.24	0.36		0.57	0.9	0.12	0.1		
8/23/2018 11:22	7.07	707.14	6.80	513.42	486.70	7.3	1596.7	10.80	11.01	0.21	-0.03		0.57	1.1	0.14	0.2		
8/30/2018 11:41	7.01	714.15	7.01	520.43	488.70	2.0	1598.7	10.89	11.14	0.25	0.06		0.57	0.3	0.04	0.0		
9/5/2018 10:49	5.96	720.11	5.96	526.39	494.70	6.0	1604.7	10.94	11.20	0.26	0.11		0.57	1.0	0.13	0.2		
9/14/2018 14:10	9.14	729.25	9.14	535.53	502.70	8.0	1612.7	10.25	10.55	0.30	-0.58		0.57	0.9	0.12	0.2		
9/21/2018 12:40	6.94	736.19	6.70	542.22	506.70	4.0	1616.7	11.12	11.37	0.25	0.29		0.57	0.6	0.08	0.1		
9/25/2018 13:44	4.04	740.24	4.04	546.26	514.70	8.0	1624.7	10.63	10.87	0.24	-0.20		0.57	2.0	0.26	0.3		
10/4/2018 10:48	8.88	749.11	8.88	555.13	517.10	2.4	1627.1	11.15	11.32	0.17	0.32		0.57	0.3	0.04	0.0		
10/16/2018 15:06	12.18	761.29	11.53	566.66	523.30	6.2	1633.3	10.90	12.00	1.10	0.07		0.57	0.5	0.07	0.1		
10/23/2018 13:36	6.94	768.23	0.00	566.66	523.30	0.0	1633.3	10.48	12.65	2.17	-0.35		0.57	0.0	0.00	0.0		
11/1/																		

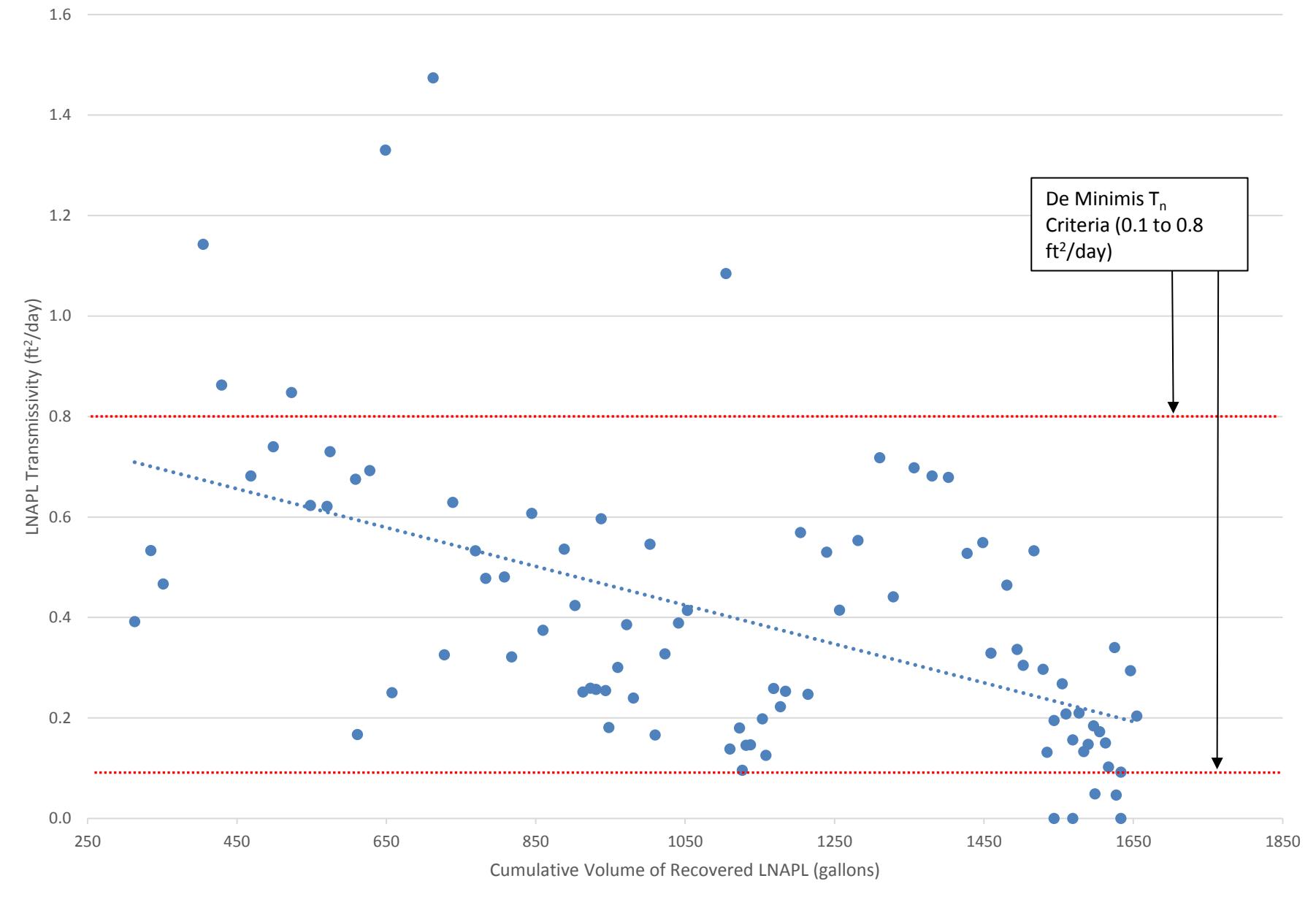
## AW-9: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-9: LNAPL Volumetric Recovery Decline Curve Analysis



## AW-9: LNAPL Transmissivity Decline Curve Analysis



## Appendix A

**AW-11 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium	--			--	--		10.75	14.14	3.39	--	0.49	--	--	--	--	--	
AW-11 Short-Term Test	6/28/2016 9:45	--			--	--		10.21	13.32	3.11	--		--	--	--	--	--	
	6/28/2016 14:00	0.18		0.18	0.18	6.16	6.16	6.16	--	--	--		0.49	34.8	4.65	6.9		
	7/1/2016 9:40	2.82		2.81	2.99	18.06	11.90	18.06	10.40	12.38	1.98	-0.35		0.49	4.2	0.57	0.8	
	7/7/2016 13:50	6.17		6.17	9.16	41.86	23.80	41.86	10.87	13.23	2.36	0.12		0.49	3.9	0.52	0.8	
	7/11/2016 12:40	3.95		2.28	11.45	52.1	10.3	52.1	11.14	12.98	1.84	0.39		0.49	4.5	0.60	0.9	
	7/12/2016 9:25	0.86		0.65	12.10	58.7	6.6	58.7	11.25	12.65	1.40	0.50		0.49	10.1	1.35	2.0	
	7/12/2016 12:25	0.13		0.13	12.23	59.5	0.8	59.5	11.39	12.70	1.31	0.64		0.49	6.6	0.88	1.3	
	7/19/2016 12:22	7.00		6.80	19.02	91.5	32.0	91.5	11.18	11.97	0.79	0.43		0.49	4.7	0.63	0.9	
	7/27/2016 12:15	5.95		5.85	27.24	119.4	27.9	119.4	11.80	12.00	0.20	1.05		0.49	4.8	0.64	1.0	1.1
AW-11 Long-Term Test	1/19/2017 14:16	--	0.00	--	--	--	119.4	11.06	14.95	3.89	--		--	--	--	--	--	
	1/20/2017 11:15	0.87	0.87	0.62	0.62	11.3	11.3	130.8	11.82	12.14	0.32	1.07		0.49	18.4	2.46	3.7	
	1/26/2017 12:52	6.07	6.94	6.07	6.68	31.3	20.0	150.8	11.19	11.51	0.32	0.44		0.49	3.3	0.44	0.7	
	1/31/2017 12:36	4.99	11.93	4.97	11.65	47.6	16.3	167.0	11.41	11.70	0.29	0.66		0.49	3.3	0.44	0.7	
	2/7/2017 12:39	7.00	18.93	7.00	18.65	143.5	95.9	262.9	11.72	11.90	0.18	0.97		0.49	13.7	1.83	2.7	
	2/13/2017 14:02	6.06	24.99	6.06	24.71	159.1	15.6	278.5	11.44	11.90	0.46	0.69		0.49	2.6	0.34	0.5	
	2/14/2017 14:41	1.03	26.02	1.03	25.74	161.6	2.5	281.0	11.26	11.49	0.23	0.51		0.49	2.5	0.33	0.5	
	2/23/2017 10:58	8.85	34.86	8.85	34.58	174.1	12.5	293.5	11.25	11.60	0.35	0.50		0.49	1.4	0.19	0.3	
	3/2/2017 10:00	7.96	42.82	7.86	42.44	184.6	10.5	304.0	12.12	12.25	0.13	1.37		0.49	1.3	0.18	0.3	
	3/7/2017 13:18	4.14	46.96	4.14	46.57	188.9	4.3	308.3	11.85	12.15	0.30	1.10		0.49	1.0	0.14	0.2	
	3/10/2017 10:13	2.87	49.83	2.87	49.45	199.4	10.6	318.8	11.70	12.02	0.32	0.95		0.49	3.7	0.49	0.7	
	3/16/2017 11:08	6.04	55.87	6.00	55.44	205.6	6.2	325.0	12.26	12.49	0.23	1.51		0.49	1.0	0.14	0.2	
	3/23/2017 10:30	6.97	62.84	6.97	62.42	277.6	72.0	397.0	12.22	12.45	0.23	1.47		0.49	10.3	1.38	2.1	
	3/31/2017 8:10	7.90	70.75	0.33	62.75	287.8	10.2	407.2	11.78	13.10	1.32	1.03		0.49	30.9	4.13	6.2	
	4/3/2017 9:51	3.07	73.82	3.07	65.82	445.3	157.5	564.7	12.71	12.75	0.04	1.96		0.49	51.3	6.86	10.2	
	4/13/2017 11:35	10.07	83.89	9.81	75.63	458.6	13.3	578.0	11.84	12.09	0.25	1.09		0.49	1.4	0.18	0.3	
	4/18/2017 11:13	4.98	88.87	4.98	80.61	467.7	9.1	587.1	11.90	12.16	0.26	1.15		0.49	1.8	0.24	0.4	
	4/27/2017 11:11	9.00	97.87	9.00	89.61	478.6	10.9	598.0	11.74	12.08	0.34	0.99		0.49	1.2	0.16	0.2	
	5/2/2017 12:51	5.07	102.94	5.07	94.68	486.9	8.3	606.3	12.25	13.39	1.14	1.50		0.49	1.6	0.22	0.3	
	5/10/2017 10:54	7.92	110.86	7.65	102.34	500.6	13.7	620.0	12.09	12.38	0.29	1.34		0.49	1.8	0.24	0.4	
	5/17/2017 7:54	6.88	117.73	6.88	109.21	512.6	12.0	632.0	12.11	12.34	0.23	1.36		0.49	1.7	0.23	0.3	
	5/26/2017 11:06	9.13	126.87	9.13	118.35	527.3	14.7	646.7	12.02	12.21	0.19	1.27		0.49	1.6	0.22	0.3	
	6/1/2017 8:10	5.88	132.75	5.83	124.18	532.6	5.3	652.0	11.89	12.19	0.30	1.14		0.49	0.9	0.12	0.2	
	6/8/2017 11:30	7.14	139.88	7.14	131.32	540.7	8.1	660.1	11.31	11.48	0.17	0.56		0.49	1.1	0.15	0.2	
	6/15/2017 10:45	6.97	146.85	6.70	138.02	550.0	9.3	669.4	11.85	11.98	0.13	1.10		0.49	1.4	0.19	0.3	
	6/20/2017 10:04	4.97	151.82	4.97	142.99	554.6	4.6	674.0	11.99	12.24	0.25	1.24		0.49	0.9	0.12	0.2	
	6/22/2017 10:50	2.03	153.86	2.03	145.03	581.8	27.2	701.2	11.86	12.02	0.16	1.11		0.49	13.4	1.79	2.7	
	6/26/2017 11:23	4.02	157.88	4.02	149.05	595.7	13.9	715.1	12.09	12.12	0.03	1.34		0.49	3.5	0.46	0.7	
	6/30/2017 11:52	4.02	161.90	4.02	153.07	605.7	10.0	725.1	11.66	11.88	0.22	0.91		0.49	2.5	0.33	0.5	
	7/7/2017 8:24	6.86	168.76	6.86	159.92	618.7	13.0	738.1	11.28	11.49	0.2							

## Appendix A

**AW-11 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered During Measurement Interval (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-11 Long-Term Test	8/2/2017 12:00	7.04	194.91	7.04	185.80	657.7	7.3	777.1	10.82	11.09	0.27	0.07		0.49	1.0	0.14	0.2	
	8/9/2017 9:42	6.90	201.81	6.90	192.71	672.7	15.0	792.1	10.90	11.04	0.14	0.15		0.49	2.2	0.29	0.4	
	8/17/2017 8:46	7.96	209.77	7.96	200.67	685.7	13.0	805.1	10.55	10.78	0.23	-0.20		0.49	1.6	0.22	0.3	
	8/22/2017 12:35	5.16	214.93	4.89	205.55	699.2	13.5	818.6	10.55	10.82	0.27	-0.20		0.49	2.8	0.37	0.6	
	8/30/2017 17:30	8.20	223.13	8.20	213.76	718.7	19.5	838.1	10.83	10.93	0.10	0.08		0.08	2.4	0.32	2.9	
	9/6/2017 13:55	6.85	229.99	6.85	220.61	733.7	15.0	853.1	10.75	11.01	0.26	0.00		0.49	2.2	0.29	0.4	
	<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																	
	9/22/2017 8:39	--	245.77	--	--	--	853.1	10.08	12.32	2.24	--			--	--	--	--	
	9/22/2017 9:56	0.05	245.82	0.05	220.66	736.7	3.0	856.1	10.77	10.98	0.21	0.02		0.49	56.7	7.57	11.3	
	9/29/2017 13:35	7.15	252.97	7.15	227.81	752.9	16.2	872.3	10.61	10.78	0.17	-0.14		0.49	2.3	0.30	0.5	
	10/6/2017 13:55	7.01	259.99	0.37	228.18	752.9	0.0	872.3	9.98	10.95	0.97	-0.77		0.49	0.0	0.00	0.0	
	10/12/2017 11:42	5.91	265.89	5.90	234.08	764.9	12.0	884.3	10.83	10.99	0.16	0.08		0.49	2.0	0.27	0.4	
	10/19/2017 11:50	7.01	272.90	4.08	238.15	771.7	6.8	891.1	10.22	11.44	1.22	-0.53		0.49	1.7	0.22	0.3	
	11/2/2017 9:15	13.89	286.79	13.88	252.03	798.6	26.9	918.0	11.21	11.45	0.24	0.46		0.49	1.9	0.26	0.4	
	11/8/2017 12:27	6.13	292.92	6.13	258.17	804.8	6.2	924.2	11.17	11.39	0.22	0.42		0.49	1.0	0.14	0.2	
	11/15/2017 11:50	6.97	299.90	6.97	265.13	811.6	6.8	931.0	11.03	11.22	0.19	0.28		0.49	1.0	0.13	0.2	
	11/22/2017 10:36	6.95	306.85	6.94	272.07	820.6	9.0	940.0	11.52	11.79	0.27	0.77		0.49	1.3	0.17	0.3	
	11/30/2017 11:32	8.04	314.89	7.86	279.93	830.6	10.0	950.0	11.47	11.72	0.25	0.72		0.49	1.3	0.17	0.3	
	12/6/2017 12:19	6.03	320.92	6.03	285.96	834.6	4.0	954.0	11.16	11.38	0.22	0.41		0.49	0.7	0.09	0.1	
	12/13/2017 11:08	6.95	327.87	6.94	292.90	840.6	6.0	960.0	11.59	11.82	0.23	0.84		0.49	0.9	0.12	0.2	
	12/21/2017 13:00	8.08	335.95	8.07	300.97	846.6	6.0	966.0	11.55	11.68	0.13	0.80		0.49	0.7	0.10	0.1	
	12/28/2017 13:48	7.03	342.98	6.75	307.72	853.2	6.6	972.6	11.80	12.05	0.25	1.05		0.49	1.0	0.13	0.2	
	1/5/2018 14:01	8.01	350.99	8.00	315.72	858.6	5.4	978.0	11.52	11.75	0.23	0.77		0.49	0.7	0.09	0.1	
	1/12/2018 13:09	6.96	357.95	6.27	322.00	864.6	6.0	984.0	11.74	11.95	0.21	0.99		0.49	1.0	0.13	0.2	
	1/19/2018 13:55	7.03	364.99	7.03	329.02	871.8	7.2	991.2	11.56	11.84	0.28	0.81		0.49	1.0	0.14	0.2	
	1/26/2018 9:47	6.83	371.81	6.83	335.85	875.6	3.8	995.0	12.17	12.42	0.25	1.42		0.49	0.6	0.07	0.1	
	2/1/2018 12:25	6.11	377.92	5.74	341.59	879.6	4.0	999.0	11.58	11.86	0.28	0.83		0.49	0.7	0.09	0.1	
	2/7/2018 9:12	5.87	383.79	5.86	334.89	885.6	6.0	1005.0	11.96	12.28	0.32	1.21		0.49	1.0	0.14	0.2	
	2/15/2018 12:21	8.13	391.92	8.12	343.97	890.6	5.0	1010.0	11.50	11.74	0.24	0.75		0.49	0.6	0.08	0.1	
	2/22/2018 14:34	7.09	399.01	7.09	348.68	895.6	5.0	1015.0	11.67	11.89	0.22	0.92		0.49	0.7	0.09	0.1	
	2/28/2018 8:27	5.75	404.76	5.74	340.63	898.6	3.0	1018.0	11.32	11.55	0.23	0.57		0.49	0.5	0.07	0.1	
	3/8/2018 9:39	8.05	412.81	7.77	351.74	902.6	4.0	1022.0	11.67	11.99	0.32	0.92		0.49	0.5	0.07	0.1	
	3/15/2018 12:50	7.13	419.94	7.06	355.74	910.6	8.0	1030.0	11.62	11.86	0.24	0.87		0.49	1.1	0.15	0.2	
	3/22/2018 12:06	6.97	426.91	6.96	347.59	916.6	6.0	1036.0	12.13	12.31	0.18	1.38		0.49	0.9	0.12	0.2	
	3/29/2018 11:21	6.97	433.88	0.55	352.28	923.2	6.6	1042.6	11.55	11.88	0.33	0.80		0.49	12.1	1.62	2.4	
	4/6/2018 11:18	8.00	441.88	7.99	363.73	927.6	4.4	1047.0	11.95	12.26	0.31	1.20		0.49	0.6	0.07	0.1	
	4/12/2018 12:25	6.05	447.92	6.04	353.63	930.9	3.3	1050.3	11.77	12.00	0.23	1.02		0.49	0.5	0.07	0.1	
	4/18/2018 13:10	6.03	453.95	6.03	358.31	938.6	7.7	1058.0	10.95	11.19	0.24	0.20		0.49	1.3	0.17	0.3	
	4/27/2018 13:09	9.00	462.															

## Appendix A

**AW-11 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered During Measurement Interval (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-11 Long-Term Test	6/14/2018 11:55	6.94	510.90	6.94	369.38	982.0	8.3	1101.4	10.94	11.07	0.13	0.19		0.49	1.2	0.16	0.2	
	6/22/2018 14:08	8.09	518.99	8.09	376.51	995.0	13.0	1114.4	11.41	11.70	0.29	0.66		0.49	1.6	0.21	0.3	
	6/28/2018 10:19	5.84	524.84	5.83	392.66	999.0	4.0	1118.4	11.06	11.40	0.34	0.31		0.49	0.7	0.09	0.1	
	7/5/2018 11:20	7.04	531.88	6.76	376.14	1007.3	8.3	1126.7	11.28	11.50	0.22	0.53		0.49	1.2	0.16	0.2	
	7/9/2018 14:17	4.12	536.00	0.15	369.53	1011.4	4.1	1130.8	11.32	11.55	0.23	0.57		0.49	26.6	3.56	5.3	
	7/19/2018 11:32	9.89	545.89	9.89	386.40	1027.0	15.6	1146.4	12.13	12.36	0.23	1.38		0.49	1.6	0.21	0.3	
	7/25/2018 11:31	6.00	551.89	6.00	398.66	1033.0	6.0	1152.4	10.75	10.99	0.24	0.00		0.49	1.0	0.13	0.2	
	8/1/2018 10:28	6.96	558.84	6.96	383.09	1044.0	11.0	1163.4	11.15	11.40	0.25	0.40		0.49	1.6	0.21	0.3	
	8/9/2018 10:41	8.01	566.85	7.80	377.34	1057.6	13.6	1177.0	10.79	11.04	0.25	0.04		0.49	1.7	0.23	0.3	
	8/16/2018 11:00	7.01	573.86	7.01	393.41	1070.0	12.4	1189.4	11.35	11.57	0.22	0.60		0.49	1.8	0.24	0.4	
	8/23/2018 11:34	7.02	580.89	7.02	405.68	1076.2	6.2	1195.6	11.07	11.24	0.17	0.32		0.49	0.9	0.12	0.2	
	8/30/2018 11:55	7.01	587.90	7.01	390.11	1078.2	2.0	1197.6	11.16	11.38	0.22	0.41		0.49	0.3	0.04	0.1	
	9/5/2018 10:59	5.96	593.86	5.75	383.09	1087.2	9.0	1206.6	11.14	11.36	0.22	0.39		0.49	1.6	0.21	0.3	
	9/14/2018 13:33	9.11	602.97	9.11	402.52	1105.2	18.0	1224.6	10.83	11.05	0.22	0.08		0.49	2.0	0.26	0.4	
	9/21/2018 13:05	6.98	609.95	6.98	412.66	1105.7	0.5	1225.1	11.34	11.62	0.28	0.59		0.49	0.1	0.01	0.0	
	9/25/2018 13:04	4.00	613.95	4.00	394.11	1113.6	7.9	1233.0	11.01	11.25	0.24	0.26		0.49	2.0	0.26	0.4	
	10/4/2018 11:59	8.95	622.90	8.75	391.84	1123.2	9.6	1242.6	11.35	11.67	0.32	0.60		0.49	1.1	0.15	0.2	
	10/10/2018 10:52	5.95	628.86	5.95	408.47	1127.7	4.5	1247.1	10.76	10.98	0.22	0.01		0.49	0.8	0.10	0.2	
	10/17/2018 8:45	6.91	635.77	6.91	419.57	1136.9	9.2	1256.3	11.20	11.45	0.25	0.45		0.49	1.3	0.18	0.3	
	10/23/2018 13:00	6.18	641.95	5.97	400.08	1142.9	6.0	1262.3	11.02	11.26	0.24	0.27		0.49	1.0	0.13	0.2	
	11/1/2018 10:46	8.91	650.85	8.91	400.74	1153.4	10.5	1272.8	11.53	11.76	0.23	0.78		0.49	1.2	0.16	0.2	
	11/8/2018 14:20	7.15	658.00	7.15	415.62	1160.9	7.5	1280.3	11.26	11.49	0.23	0.51		0.49	1.0	0.14	0.2	
																	0.31	

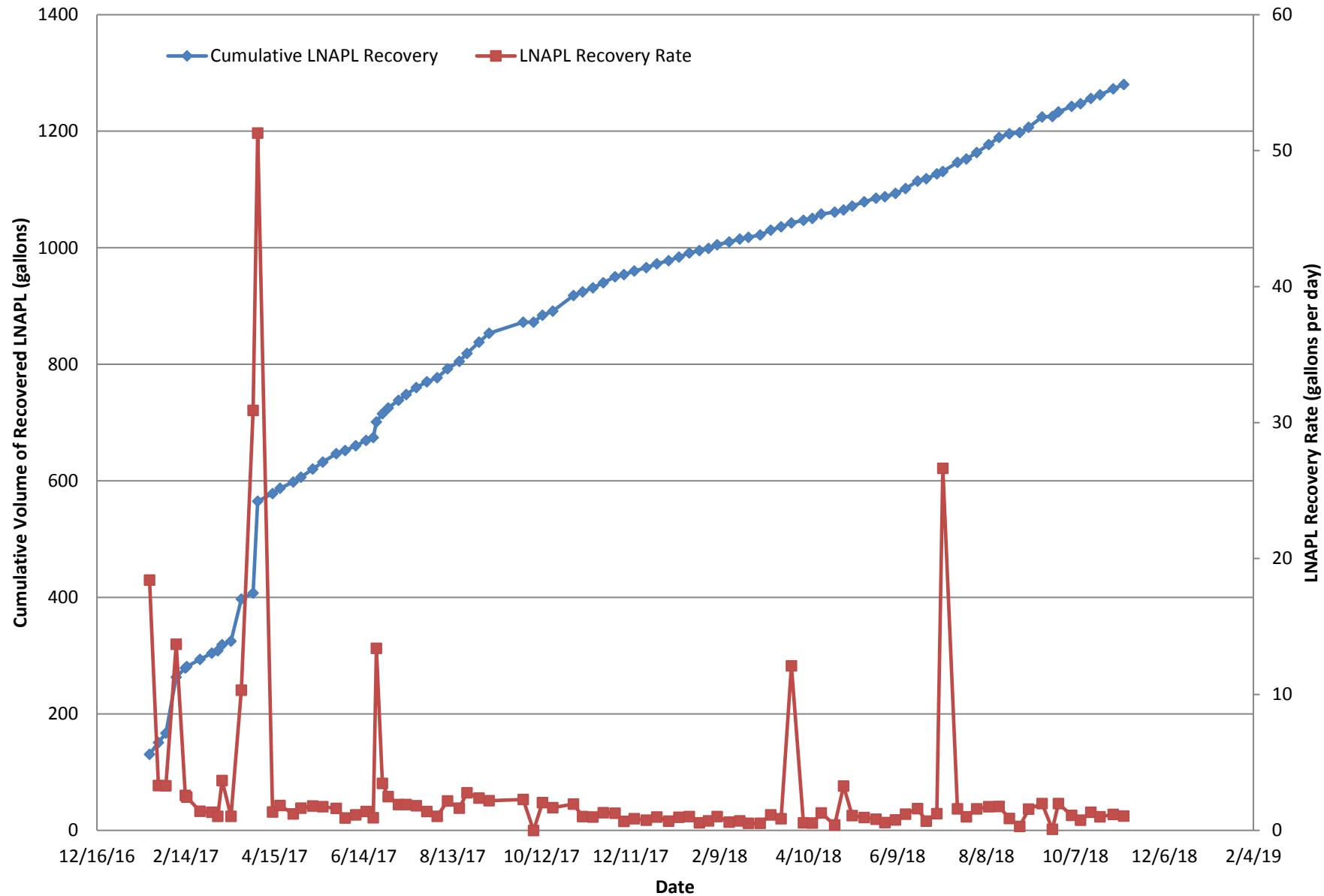
0.854

Assumed LNAPL specific gravity =

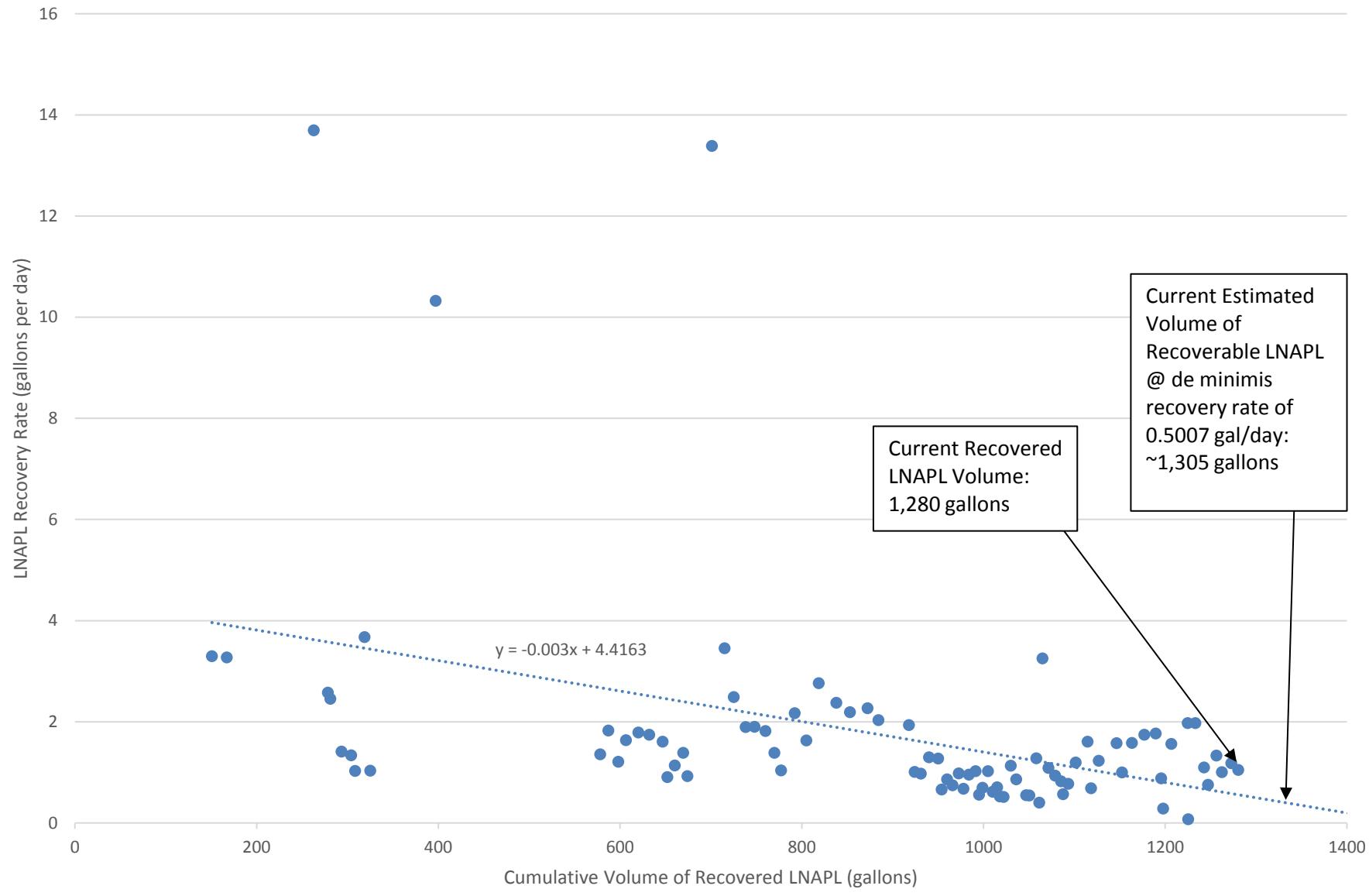
All calculations performed pursuant to the methodology detailed in ASTM E2856-13

<sup>a</sup>The maximum theoretical drawdown is used for each interval calculation where the measured drawdown is negative or where it exceeds the theoretical maximum.<sup>b</sup>Represents the geometric mean of the stabilized recovery rates/LNAPL transmissivity estimates (i.e., excludes initial elevated values that would not represent potential long-term recovery rates).

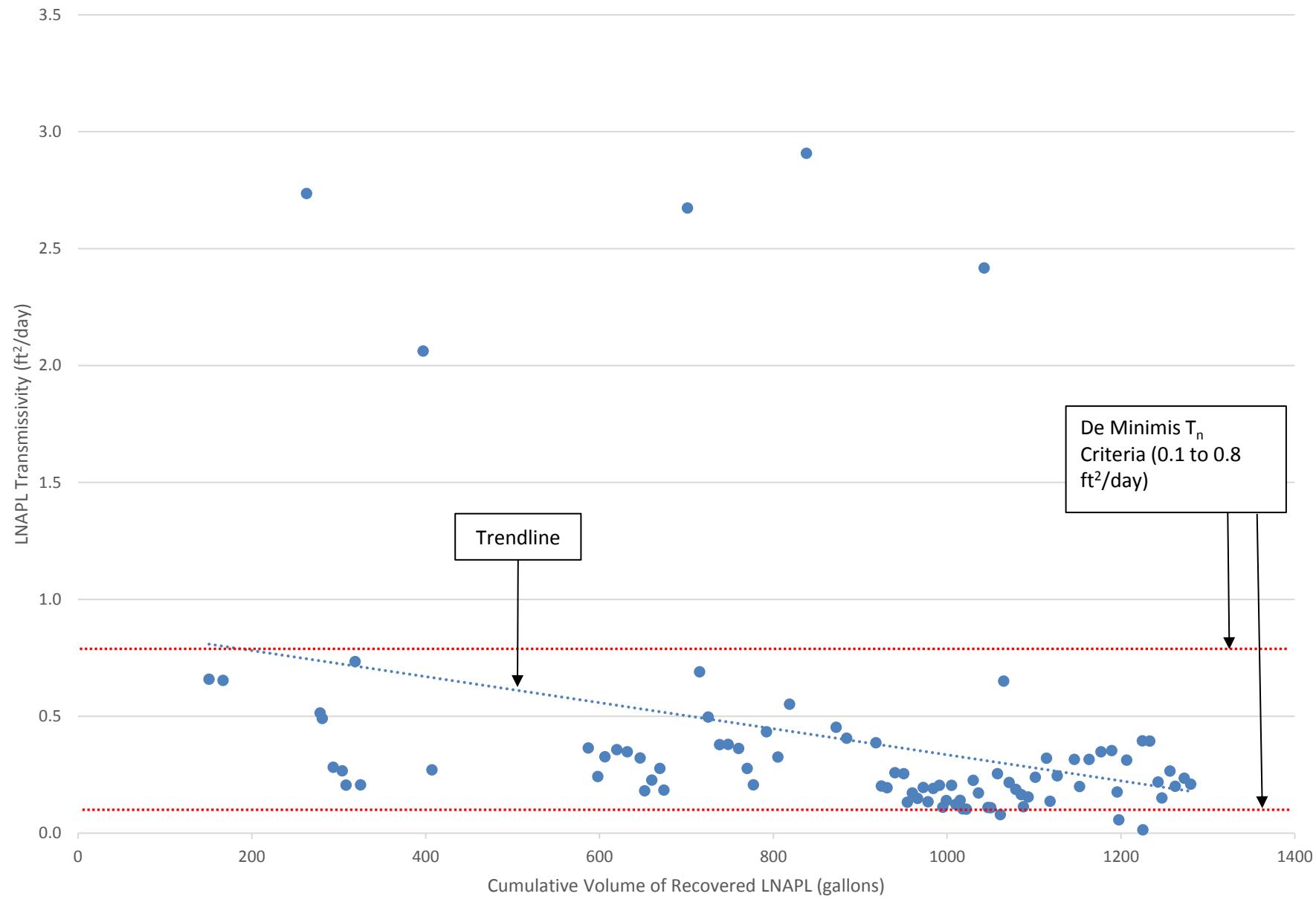
## AW-11: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-11: LNAPL Volumetric Recovery Decline Curve Analysis



## AW-11: LNAPL Transmissivity Decline Curve Analysis



## Appendix A

**AW-49 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium	--		--	--	--	--		12.92	16.35	3.43	--	0.50		--	--	--	
AW-49 Short Term Test	6/8/2016 17:00	--		--	--	--	--		12.71	17.76	5.05	--		--				
	6/9/2016 9:00	0.67		0.67	0.67	7.8	7.8	7.8	11.36	16.24	4.88	-1.56		0.50	11.7	1.56	2.3	
	6/10/2016 7:17	0.93		0.92	1.58	8.6	0.8	8.6	11.16	16.20	5.04	-1.76		0.50	0.8	0.11	0.2	
	6/13/2016 10:35	2.92		2.88	4.67	20.1	11.5	20.1	11.50	16.89	5.39	-1.42		0.50	4.0	0.54	0.8	
	6/22/2016 17:10	9.27		9.15	13.82	45.3	25.2	45.3	11.72	16.91	5.19	-1.20		0.50	2.8	0.37	0.5	
	6/27/2016 15:50	4.94		0.00	13.82	45.3	0.0	45.3	11.70	17.02	5.32	-1.22		0.50	0.0	0	0	
AW-49 Long-Term Test	9/14/2016 16:35	--		--	--	--	--		12.15	15.80	3.65	--		--	--	--	--	
	9/14/2016 17:20	0.03	0.0	0.03	0.03	2.3	2.3	47.6	12.25	14.55	2.30	-0.67		0.50	73.6	9.84	14.4	
	9/15/2016 8:15	0.62	0.6	0.62	0.65	21.1	18.8	66.4	12.25	12.41	0.16	-0.67		0.50	30.2	4.04	5.9	
	9/15/2016 8:45	0.02	0.6	0.02	0.67	21.6	0.5	66.9	12.21	12.41	0.20	-0.71		0.50	24.0	3.21	4.7	
	9/15/2016 11:45	0.13	0.8	0.13	0.80	23.4	1.8	68.7	12.33	12.50	0.17	-0.59		0.50	14.4	1.92	2.8	
	9/21/2016 12:07	6.02	6.8	5.93	6.73	134.4	111.0	179.7	12.57	12.86	0.29	-0.35		0.50	18.7	2.50	3.7	
	9/22/2016 9:50	0.90	7.7	0.90	7.63	146.9	12.5	192.2	13.22	13.47	0.25	0.30		0.30	13.9	1.86	4.5	
	9/28/2016 8:35	5.95	13.6	5.94	13.57	205.2	58.3	250.5	12.37	12.60	0.23	-0.55		0.50	9.8	1.31	1.9	
	10/5/2016 14:32	7.25	20.9	6.26	19.83	260.7	55.5	306.0	12.16	12.29	0.13	-0.76		0.50	8.9	1.19	1.7	
	<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																	
	10/13/2016 13:00	7.94	28.8	0.00	19.83	0.0	--	306.0	10.60	15.33	4.73	-2.32		--	--	--	--	
	10/20/2016 12:20	6.97	35.8	3.63	23.45	267.0	267.0	573.0	10.88	14.04	3.16	-2.04		0.50	23.1	3.09	4.5	
	<b>END OF TEST INTERVAL - SHUTDOWN DUE TO FULL TANK - PUMPED 11/21/2016</b>																	
	10/28/2016 11:23	--	43.8	--	--	--	--	573.0	11.55	13.80	2.25	--		--	--	--	--	
	11/4/2016 12:30	7.05	50.8	6.13	6.13	134.0	134.0	707.0	12.35	12.67	0.32	-0.57		0.50	21.9	2.92	4.3	
	11/15/2016 17:02	11.19	62.0	11.19	17.32	356.0	222.0	929.0	13.00	13.19	0.19	0.08		0.50	19.8	2.65	3.9	
	<b>END OF TEST INTERVAL - SHUTDOWN DUE TO FULL TANK</b>																	
	11/22/2016 12:34	--	68.8	6.81	--	65.0	65.0	994.0	13.00	14.30	1.30	0.08		0.50	9.5	1.28	1.9	
	11/29/2016 15:35	--	75.9	7.13	--	115.0	50.0	1044.0	13.06	14.44	1.38	0.14		0.50	7.0	0.94	1.4	
	12/7/2016 13:20	--	83.8	--	--	--	--	1044.0	12.87	13.40	0.53	--		--	--	--	--	
	12/14/2016 9:50	--	90.7	--	--	--	--	1044.0	12.35	13.00	0.65	--		--	--	--	--	
	<b>SHUTDOWN DUE TO FULL TANK</b>																	
	12/21/2016 9:20	--	97.7	--	--	--	--	1044.0	12.93	14.30	1.37	--		--	--	--	--	
	12/27/2016 12:40	6.14	103.8	6.13	6.14	29.7	29.7	1073.7	13.03	13.40	0.37	0.11		0.50	4.8	0.65	0.9	
	1/4/2017 13:03	8.02	111.8	8.00	14.14	68.5	38.8	1112.5	13.05	13.26	0.21	0.13		0.50	4.8	0.65	0.9	
	1/9/2017 11:36	4.94	116.8	4.93	19.07	84.4	15.9	1128.4	13.41	13.68	0.27	0.49		0.50	3.2	0.43	0.6	
	1/19/2017 14:12	10.11	126.9	5.51	24.58	100.1	15.7	1144.1	12.45	14.48	2.03	-0.47		0.50	2.8	0.38	0.6	
	1/20/2017 10:49	0.86	127.7	0.12	24.71	100.1	0.0	1144.1	13.36	14.74	1.38	0.44		0.50	0.0	0.00	0.0	
	1/23/2017 15:17	3.19	130.9	1.58	26.28	105.5	5.4	1149.6	12.82	13.83	1.01	-0.10		0.50	3.4	0.46	0.7	
	1/26/2017 13:01	2.91	133.8	2.90	29.18	125.5	20.0	1169.6	12.92	13.22	0.30	0.00		0.50	6.9	0.92	1.3	
	1/31/2017 12:55	5.00	138.8	4.99	34.17	147.2	21.7	1191.3	12.65	12.90	0.25	-0.27		0.50	4.3	0.58	0.9	
	2/7/2017 12:56	7.00	145.8	6.99	41.17	168.8	21.5	1212.8	13.17	13.30	0.13	0.25		0.50	3.1	0.41	0.6	
	2/13/2017 14:28	6.06	151.9	6.06	47.23	195.8	27.0	1239.8	13.30	13.61	0.31	0.38		0.50	4.5	0.60	0.9	
	2/14/2017 14:24	1.00	152.9	1.00	48.22	197.5	1.7	1241.5	12.									

## Appendix A

**AW-49 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

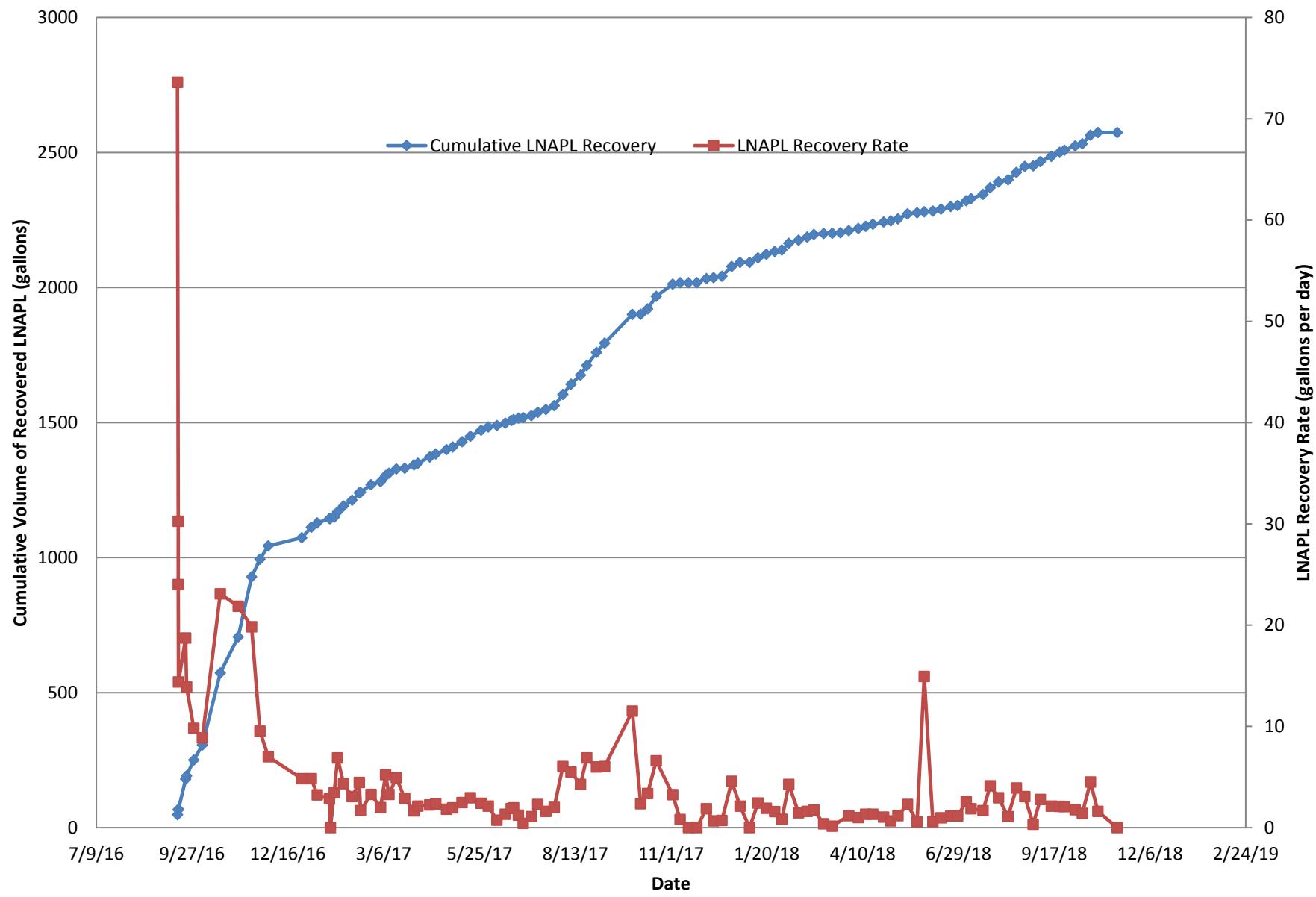
Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-49 Long-Term Test	4/3/2017 10:10	3.06	200.7	2.81	84.39	305.8	6.0	1349.8	13.74	14.02	0.28	0.82		0.50	2.1	0.29	0.4	
	4/13/2017 11:53	10.07	210.8	10.07	94.46	328.3	22.5	1372.3	13.12	13.38	0.26	0.20		0.50	2.2	0.30	0.4	
	4/18/2017 11:33	4.99	215.8	4.98	99.43	340.0	11.7	1384.0	13.70	14.10	0.40	0.78		0.50	2.4	0.31	0.5	
	4/27/2017 11:03	8.98	224.7	8.97	108.41	356.3	16.3	1400.3	13.00	13.35	0.35	0.08		0.50	1.8	0.24	0.4	
	5/2/2017 12:47	5.07	229.8	4.82	113.23	365.8	9.5	1409.8	13.69	13.96	0.27	0.77		0.50	2.0	0.26	0.4	
	5/10/2017 10:47	7.92	237.7	7.91	121.14	385.5	19.7	1429.5	13.40	13.68	0.28	0.48		0.50	2.5	0.33	0.5	
	5/17/2017 7:46	6.87	244.6	6.87	128.00	405.8	20.3	1449.8	13.85	14.08	0.23	0.93		0.50	3.0	0.40	0.6	
	5/26/2017 10:51	9.13	253.7	9.12	137.13	427.8	22.0	1471.8	13.35	13.58	0.23	0.43		0.50	2.4	0.32	0.5	
	6/1/2017 8:02	5.88	259.6	5.62	142.75	439.8	12.0	1483.8	13.55	13.79	0.24	0.63		0.50	2.1	0.29	0.4	
	6/8/2017 11:40	7.15	266.8	7.14	149.89	445.1	5.3	1489.1	12.87	13.00	0.13	-0.05		0.50	0.7	0.10	0.1	
	6/15/2017 11:16	6.98	273.7	6.98	156.87	454.4	9.3	1498.4	13.51	13.79	0.28	0.59		0.50	1.3	0.18	0.3	
	6/20/2017 9:56	4.94	278.7	4.94	161.81	463.8	9.4	1507.8	13.52	13.74	0.22	0.60		0.50	1.9	0.25	0.4	
	6/22/2017 10:46	2.03	280.7	2.03	163.84	467.8	4.0	1511.8	13.13	13.41	0.28	0.21		0.50	2.0	0.26	0.4	
	6/26/2017 11:42	4.04	284.8	4.04	167.88	472.8	5.0	1516.8	13.07	13.33	0.26	0.15		0.50	1.2	0.17	0.2	
	6/30/2017 11:45	4.00	288.8	4.00	171.87	474.5	1.8	1518.5	13.36	13.64	0.28	0.44		0.50	0.4	0.06	0.1	
	7/7/2017 8:17	6.86	295.6	6.60	178.47	481.8	7.3	1525.8	12.92	13.17	0.25	0.00		0.50	1.1	0.15	0.2	
	7/12/2017 14:23	5.25	300.9	5.25	183.72	493.8	12.0	1537.8	12.86	13.12	0.26	-0.06		0.50	2.3	0.31	0.4	
	7/19/2017 11:22	6.87	307.8	6.87	190.59	504.8	11.0	1548.8	13.29	13.52	0.23	0.37		0.50	1.6	0.21	0.3	
	7/26/2017 11:02	6.99	314.7	6.98	197.57	518.8	14.0	1562.8	12.72	12.90	0.18	-0.20		0.50	2.0	0.27	0.4	
	8/2/2017 11:54	7.04	321.8	6.78	204.35	559.8	41.0	1603.8	12.79	13.02	0.23	-0.13		0.50	6.0	0.81	1.2	
	8/9/2017 9:46	6.91	328.7	6.90	211.25	597.8	38.0	1641.8	12.46	12.70	0.24	-0.46		0.50	5.5	0.74	1.1	
	8/17/2017 8:40	7.95	336.6	7.95	219.20	631.7	33.9	1675.7	12.34	12.58	0.24	-0.58		0.50	4.3	0.57	0.8	
	8/22/2017 12:45	5.17	341.8	5.16	224.36	667.2	35.5	1711.2	12.18	12.38	0.20	-0.74		0.50	6.9	0.92	1.3	
	8/30/2017 17:22	8.19	350.0	8.15	232.51	716.1	48.9	1760.1	12.19	12.41	0.22	-0.73		0.50	6.0	0.80	1.2	
	9/6/2017 13:15	6.83	356.8	5.72	238.24	750.7	34.6	1794.7	12.43	12.68	0.25	-0.49		0.50	6.0	0.81	1.2	
<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																		
9/21/2017 15:22	--	371.9	--	--	--	--	--	1794.7	11.28	13.61	2.33	--		--	--	--	--	
9/22/2017 8:05	0.70	372.6	0.70	0.70	22.0	22.0	1816.7	12.30	12.55	0.25	-0.62		0.50	31.6	4.22	6.2		
9/29/2017 13:45	7.24	379.9	7.24	7.93	105.3	83.3	1900.0	12.37	12.65	0.28	-0.55		0.50	11.5	1.54	2.3		
10/6/2017 13:21	6.98	386.8	0.46	8.40	106.4	1.1	1901.1	11.75	13.35	1.60	-1.17		0.50	2.4	0.32	0.5		
10/12/2017 11:32	5.92	392.8	5.92	14.32	126.4	20.0	1921.1	12.77	13.08	0.31	-0.15		0.50	3.4	0.45	0.7		
10/19/2017 12:00	7.02	399.8	7.02	21.34	172.8	46.4	1967.5	11.82	12.02	0.20	-1.10		0.50	6.6	0.88	1.3		
11/2/2017 9:05	13.88	413.7	13.88	35.21	218.1	45.3	2012.8	12.72	13.00	0.28	-0.20		0.50	3.3	0.44	0.6		
11/8/2017 12:21	6.14	419.8	6.14	41.35	223.1	5.0	2017.8	12.67	12.80	0.13	-0.25		0.50	0.8	0.11	0.2		
11/15/2017 11:42	6.97	426.8	6.97	48.32	223.1	0.0	2017.8	12.73	13.55	0.82	-0.19		0.50	0.0	0.00	0.0		
11/22/2017 10:28	6.95	433.7	6.71	55.03	223.1	0.0	2017.8	12.90	14.27	1.37	-0.02		0.50	0.0	0.00	0.0		
11/30/2017 11:24	8.04	441.8	8.04	63.07	238.1	15.0	2032.8	13.55	13.76	0.21	0.63		0.50	1.9	0.25	0.4		
12/6/2017 12:12	6.03	447.8	6.03	69.11	242.1	4.0	2036.8	12.64	12.80	0.16	-0.28		0.50	0.7	0.09	0.1		
12/13/2017 10:56	6.95	454.7	6.95	76.05	247.1	5.0	2041.8	14.39	15.08	0.69	1.47		0.50	0.7	0.10	0.1		

## Appendix A

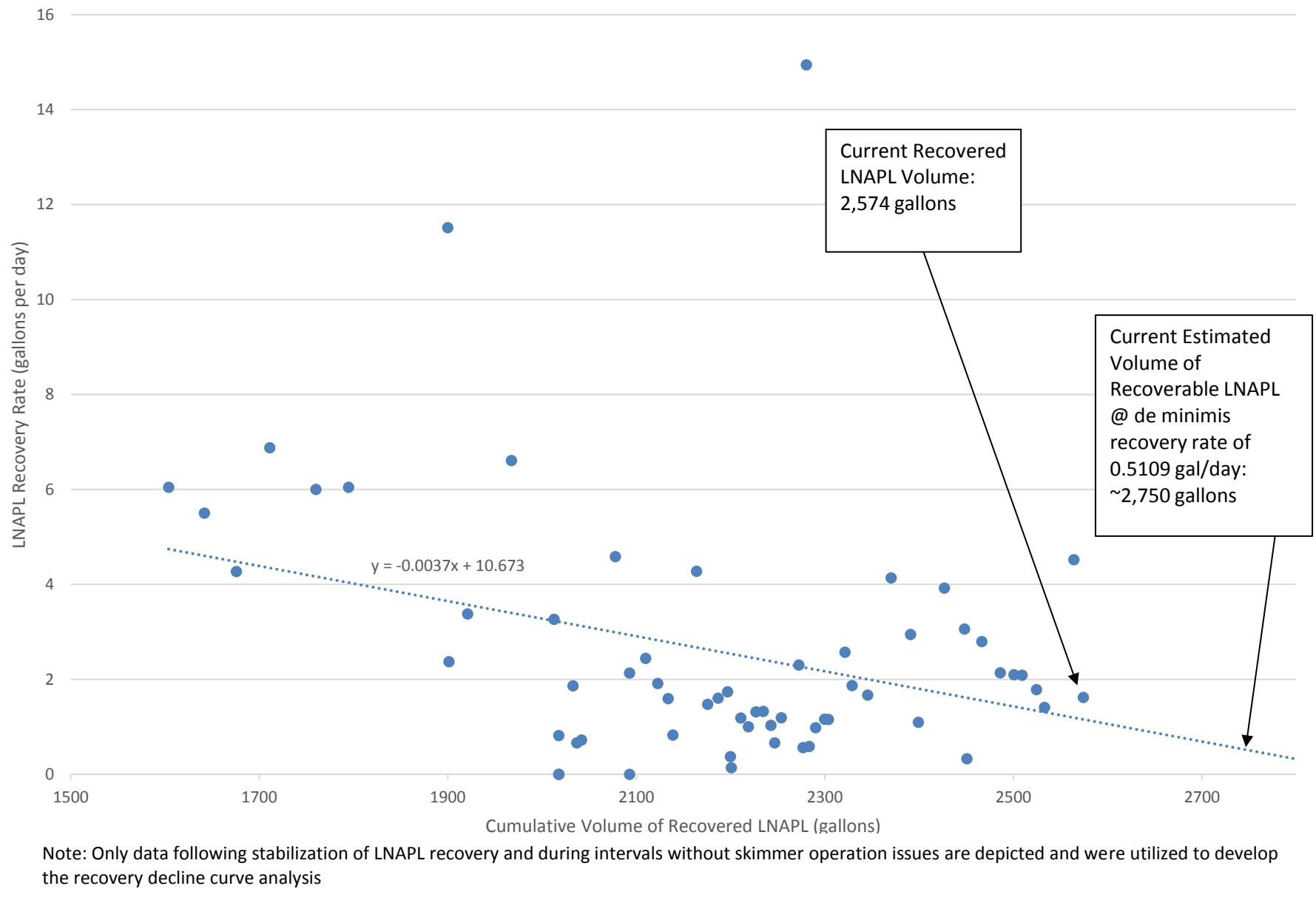
**AW-49 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Time elapsed since start (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-49 Long-Term Test	2/1/2018 12:32	6.04	504.8	6.04	125.64	344.1	5.0	2138.8	13.14	13.17	0.03	0.22		0.50	0.8	0.11	0.2	
	2/7/2018 8:52	5.85	510.6	5.85	131.49	369.1	25.0	2163.8	13.88	14.20	0.32	0.96		0.50	4.3	0.57	0.8	
	2/15/2018 12:15	8.14	518.8	8.14	139.63	381.1	12.0	2175.8	13.25	13.31	0.06	0.33		0.50	1.5	0.20	0.3	
	2/22/2018 14:27	7.09	525.9	6.85	146.48	392.1	11.0	2186.8	13.14	13.35	0.21	0.22		0.50	1.6	0.21	0.3	
	2/28/2018 8:17	5.74	531.6	5.74	152.22	402.1	10.0	2196.8	12.74	12.80	0.06	-0.18		0.50	1.7	0.23	0.3	
	3/8/2018 9:23	8.05	539.7	8.05	160.27	405.1	3.0	2199.8	13.54	13.84	0.30	0.62		0.50	0.4	0.05	0.1	
	3/15/2018 13:35	7.17	546.8	7.14	167.41	406.1	1.0	2200.8	13.24	14.75	1.51	0.32		0.50	0.1	0.02	0.0	
	3/22/2018 11:30	6.91	553.8	0.02	167.42	408.1	2.0	2202.8	13.47	15.02	1.55	0.55		0.50	113.7	15.20	22.3	
	3/29/2018 11:13	6.99	560.7	6.74	174.16	416.1	8.0	2210.8	13.07	13.24	0.17	0.15		0.50	1.2	0.16	0.2	
	4/6/2018 11:03	7.99	568.7	7.99	182.15	424.1	8.0	2218.8	13.74	13.96	0.22	0.82		0.50	1.0	0.13	0.2	
	4/12/2018 13:00	6.08	574.8	6.08	188.24	432.1	8.0	2226.8	13.83	14.10	0.27	0.91		0.50	1.3	0.18	0.3	
	4/18/2018 13:48	6.03	580.9	6.03	194.27	440.1	8.0	2234.8	13.43	13.70	0.27	0.51		0.50	1.3	0.18	0.3	
	4/27/2018 13:20	8.98	589.8	7.74	202.01	448.1	8.0	2242.8	13.52	13.76	0.24	0.60		0.50	1.0	0.14	0.2	
	5/3/2018 14:44	6.06	595.9	6.06	208.07	452.1	4.0	2246.8	13.33	13.65	0.32	0.41		0.50	0.7	0.09	0.1	
	5/9/2018 12:07	5.89	601.8	5.89	213.96	459.1	7.0	2253.8	13.80	14.03	0.23	0.88		0.50	1.2	0.16	0.2	
	5/17/2018 12:59	8.04	609.8	8.04	222.00	477.6	18.5	2272.3	13.00	13.21	0.21	0.08		0.50	2.3	0.31	0.5	
	5/25/2018 12:25	7.98	617.8	7.98	229.97	482.1	4.5	2276.8	13.57	13.85	0.28	0.65		0.50	0.6	0.08	0.1	
	5/31/2018 9:59	5.90	623.7	0.23	230.21	485.6	3.5	2280.3	12.83	13.09	0.26	-0.09		0.50	14.9	2.00	2.9	
	6/7/2018 13:45	7.16	630.9	5.45	235.66	488.8	3.2	2283.5	12.78	13.75	0.97	-0.14		0.50	0.6	0.08	0.1	
	6/14/2018 11:46	6.92	637.8	6.92	242.57	495.6	6.8	2290.3	12.47	12.68	0.21	-0.45		0.50	1.0	0.13	0.2	
	6/22/2018 14:02	8.09	645.9	8.09	250.67	505.0	9.4	2299.7	13.30	13.56	0.26	0.38		0.50	1.2	0.16	0.2	
	6/28/2018 10:13	5.84	651.7	3.55	254.22	509.1	4.1	2303.8	12.52	13.39	0.87	-0.40		0.50	1.2	0.15	0.2	
	7/5/2018 11:14	7.04	658.7	6.80	261.02	526.6	17.5	2321.3	13.14	13.39	0.25	0.22		0.50	2.6	0.34	0.5	
	7/9/2018 14:14	4.13	662.9	4.13	265.15	534.3	7.7	2329.0	13.18	13.45	0.27	0.26		0.50	1.9	0.25	0.4	
	7/19/2018 11:26	9.88	672.8	9.88	275.03	550.8	16.5	2345.5	12.98	13.13	0.15	0.06		0.50	1.7	0.22	0.3	
	7/25/2018 11:25	6.00	678.8	6.00	281.03	575.6	24.8	2370.3	12.57	12.85	0.28	-0.35		0.50	4.1	0.55	0.8	
	8/1/2018 10:23	6.96	685.7	6.96	287.99	596.1	20.5	2390.8	12.88	13.16	0.28	-0.04		0.50	2.9	0.39	0.6	
	8/9/2018 10:32	8.01	693.7	7.77	295.75	604.6	8.5	2399.3	12.30	14.08	1.78	-0.62		0.50	1.1	0.15	0.2	
	8/16/2018 10:54	7.02	700.7	7.02	302.77	632.1	27.5	2426.8	13.18	13.41	0.23	0.26		0.50	3.9	0.52	0.8	
	8/23/2018 11:27	7.02	707.8	7.02	309.79	653.6	21.5	2448.3	11.92	12.14	0.22	-1.00		0.50	3.1	0.41	0.6	
	8/30/2018 11:48	7.01	714.8	7.01	316.81	655.9	2.3	2450.6	12.75	13.04	0.29	-0.17		0.50	0.3	0.04	0.1	
	9/5/2018 10:55	5.96	720.7	5.72	322.53	671.9	16.0	2466.6	13.23	13.41	0.18	0.31		0.50	2.8	0.37	0.5	
	9/14/2018 14:02	9.13	729.9	9.13	331.66	691.4	19.5	2486.1	12.32	12.55	0.23	-0.60		0.50	2.1	0.29	0.4	
	9/21/2018 12:55	6.95	736.8	6.95	338.61	706.0	14.6	2500.7	13.30	13.66	0.36	0.38		0.50	2.1	0.28	0.4	
	9/25/2018 13:33	4.03	740.8	4.03	342.64	714.4	8.4	2509.1	12.74	12.96	0.22	-0.18		0.50	2.1	0.28	0.4	
	10/4/2018 11:54	8.93	749.8	8.69	351.33	729.9	15.5	2524.6	13.44	13.63	0.19	0.52		0.50	1.8	0.24	0.3	
	10/10/2018 10:45	5.95	755.7	5.95	357.28	738.3	8.4	2533.0	12.27	12.40	0.13	-0.65		0.50	1.4	0.19	0.3	
	10/17/2018 8:59	6.93	762.7	6.93	364.21	769.6	31.3	2564.3	13.25	13.64	0.39	0.33		0.50	4.5	0.60	0.9	
	10/23/2018 13:20	6.																

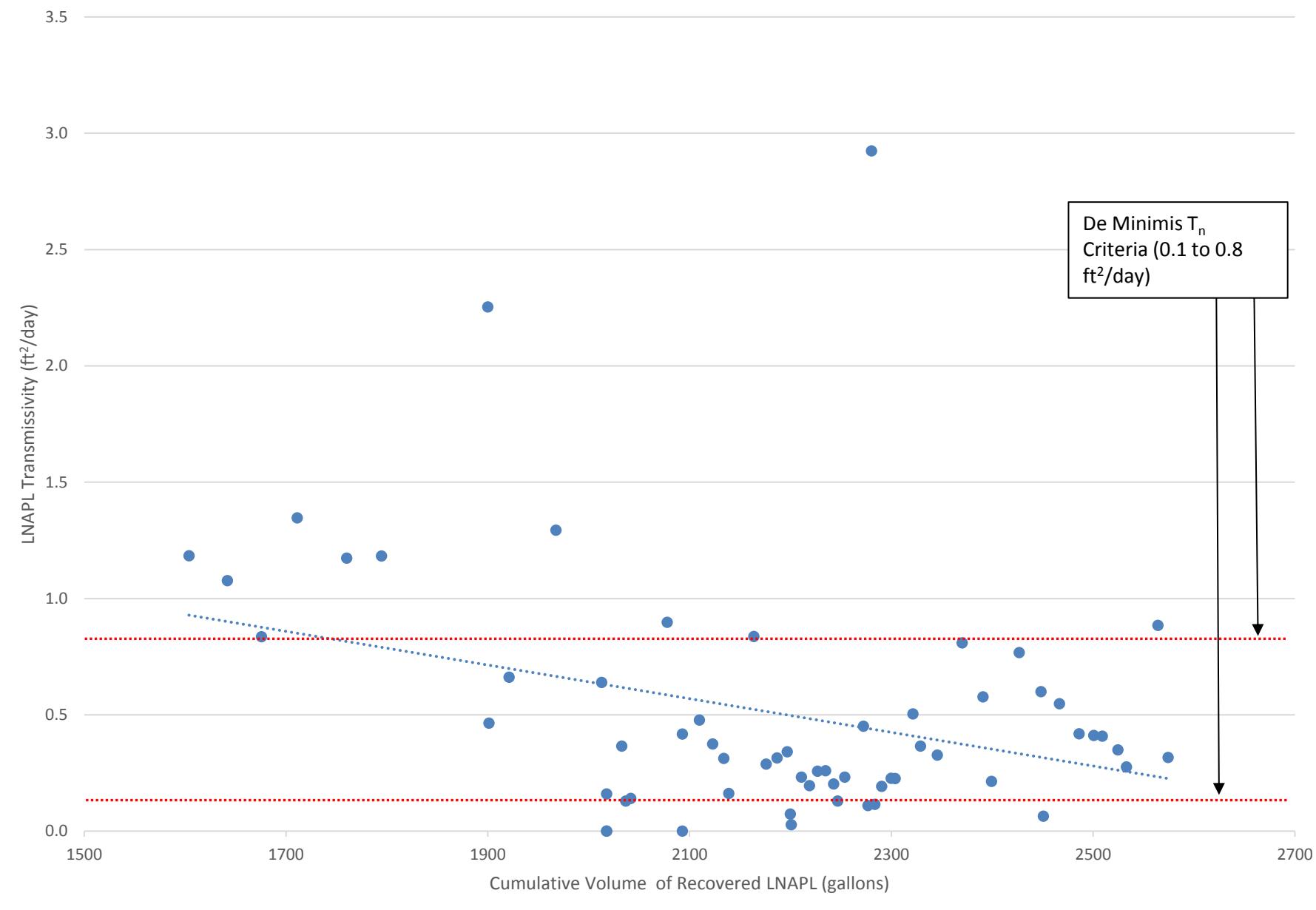
## AW-49: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-49: LNAPL Volumetric Recovery Decline Curve Analysis



## AW-49: LNAPL Transmissivity Decline Curve Analysis



## Appendix A

**AW-56 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium							8.74	14.19	5.45	--	0.80		--	--	--	
AW-56 Short Term Test	8/25/2016 11:45	--		--	--	--		9.12	15.13	6.01	--		--	--	--	--	
	8/31/2016 10:40	5.95	5.95	5.95	36.1	36.1	36.1	10.01	13.02	3.01	1.27		0.80	6.1	0.81	0.7	
	9/7/2016 11:45	7.05	7.05	13.00	67.3	31.2	67.3	10.90	13.40	2.50	2.16		0.80	4.4	0.59	0.5	
	9/14/2016 17:30	7.24	7.24	20.24	117.3	50.0	117.3	10.99	14.55	3.56	2.25		0.80	6.9	0.92	0.8	
	9/15/2016 7:45	0.59	0.59	20.83	126.8	9.5	126.8	10.98	11.10	0.12	2.24		0.80	16.0	2.14	2.0	
	9/21/2016 14:40	6.29	6.29	27.12	131.3	4.50	131.3	--	--	--	--		--	--	--	0.9	
AW-56 Long-Term Test	2/23/2017 9:45	--	--	--	--	--		10.80	15.85	5.05	--		--	--	--	--	
	2/23/2017 11:42	0.08	0.05	0.05	38.1	38.1	169.4	12.05	13.33	1.28	3.31		0.80	744.3	99.50	91.5	
	2/23/2017 13:08	0.06	0.06	0.11	40.5	2.4	171.8	12.30	12.65	0.35	3.56		0.80	40.2	5.37	4.9	
	3/3/2017 9:40	7.86	7.86	7.97	74.4	33.9	205.8	12.72	13.00	0.28	3.98		0.80	4.3	0.58	0.5	
	<b>SHUTDOWN DUE TO TANK FAILURE</b>																
	3/7/2017 14:00	--	--	--	--	--	220.8	12.20	16.95	4.75	--		--	--	--	--	
	3/10/2017 9:40	2.82	2.82	2.82	11.5	11.5	232.3	11.34	14.90	3.56	2.60		0.80	4.1	0.54	0.5	
	3/16/2017 10:35	6.04	6.04	8.86	17.7	6.2	238.4	11.86	16.90	5.04	3.12		0.80	1.0	0.14	0.1	
	3/23/2017 9:58	6.97	6.07	14.93	51.2	33.5	272.0	11.77	13.61	1.84	3.03		0.80	5.5	0.74	0.7	
	3/31/2017 7:50	7.91	7.65	22.58	59.4	8.2	280.2	12.75	13.00	0.25	4.01		0.80	1.1	0.14	0.1	
	4/3/2017 9:38	3.07	3.09	25.67	72.4	13.0	293.2	12.72	12.90	0.18	3.98		0.80	4.2	0.56	0.5	
	4/13/2017 11:20	10.07	10.11	35.78	106.2	33.8	327.0	11.76	11.91	0.15	3.02		0.80	3.3	0.45	0.4	
	4/18/2017 10:47	4.98	5.00	40.78	119.9	13.7	340.7	12.25	15.25	3.00	3.51		0.80	2.7	0.37	0.3	
	4/27/2017 10:41	9.00	9.03	49.80	130.9	11.0	351.7	11.10	14.35	3.25	2.36		0.80	1.2	0.16	0.1	
	5/2/2017 12:58	5.10	5.11	54.92	155.2	24.3	376.0	12.44	12.66	0.22	3.70		0.80	4.8	0.64	0.6	
	5/10/2017 10:30	7.90	7.65	62.56	179.2	24.0	400.0	12.00	12.46	0.46	3.26		0.80	3.1	0.42	0.4	
	5/17/2017 7:32	6.88	6.90	69.47	208.2	29.0	429.0	12.83	13.28	0.45	4.09		0.80	4.2	0.56	0.5	
	5/26/2017 10:42	9.13	9.16	78.63	244.2	36.0	465.0	11.95	11.98	0.03	3.21		0.80	3.9	0.53	0.5	
	6/1/2017 7:45	5.88	5.90	84.53	263.2	19.0	484.0	12.31	12.59	0.28	3.57		0.80	3.2	0.43	0.4	
	6/8/2017 11:15	7.15	6.89	91.42	271.7	8.5	492.5	11.13	12.86	1.73	2.39		0.80	1.2	0.16	0.2	
	6/15/2017 10:29	6.97	6.98	98.39	305.2	33.5	526.0	12.51	12.72	0.21	3.77		0.80	4.8	0.64	0.6	
	6/20/2017 9:36	4.96	4.88	103.28	320.2	15.0	541.0	12.27	12.51	0.24	3.53		0.80	3.1	0.41	0.4	
	6/22/2017 10:57	2.06	2.04	105.31	327.2	7.0	548.0	11.86	12.00	0.14	3.12		0.80	3.4	0.46	0.4	
	6/26/2017 12:30	4.06	4.08	109.39	341.2	14.0	562.0	11.55	11.60	0.05	2.81		0.80	3.4	0.46	0.4	
	6/30/2017 12:28	4.00	3.92	113.31	360.2	19.0	581.0	12.02	12.11	0.09	3.28		0.80	4.9	0.65	0.6	
	7/7/2017 8:03	6.82	6.84	120.14	383.2	23.0	604.0	11.65	11.84	0.19	2.91		0.80	3.4	0.45	0.4	
	7/12/2017 14:36	5.27	5.19	125.34	407.8	24.6	628.6	11.65	11.74	0.09	2.91		0.80	4.7	0.63	0.6	
	7/19/2017 11:45	6.88	6.90	132.24	449.2	41.4	670.0	12.51	12.68	0.17	3.77		0.80	6.0	0.80	0.7	
	7/26/2017 11:24	6.99	6.91	139.15	466.5	17.3	687.3	11.30	11.43	0.13	2.56		0.80	2.5	0.33	0.3	
	8/2/2017 12:06	7.03	0.01	139.16	469.5	3.0	690.3	10.91	17.11	6.20	2.17		0.80	326.0	43.58	39.9	
	8/9/2017 10:00	6.91	6.83	145.99	501.5	32.0	722.3	11.11	11.22	0.11	2.37		0.80	4.7	0.63	0.6	
	8/17/2017 8:26	7.93	7.87	153.85	531.5	30.0	752.3	11.13	11.25	0.12	2.39		0.80	3.8	0.51	0.5	
	8/22/2017 12:25	5.17	5.09	158.94	552.0	20.5	772.8	10.80	10.98	0.18	2.06		0.80	4.0	0.54	0.5	
	8/30/2017 17:38	8.22	8.24	167.18	576.5	24.5	797.3	10.74	10.91	0.17	2.00		0.80	3.0	0.40	0.4	
	9/6/2017 12:47	6.80	3.44	170.62	587.5	11.0	808.3	10.24	15.51	5.27	1.50		0.80	3.2	0.43	0.4	
<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																	

## Appendix A

**AW-56 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-56 Long-Term Test	9/21/2017 12:03	--	--	--	--	--	808.3	9.42	15.12	5.70	--			--	--	--	
	9/22/2017 11:50	0.99	0.91	171.53	7.0	7.0	815.3	10.82	11.06	0.24	2.08		0.80	7.7	1.03	0.9	
	9/29/2017 13:24	7.07	7.07	178.59	34.5	27.5	842.8	11.26	11.45	0.19	2.52		0.80	3.9	0.52	0.5	
	10/6/2017 12:35	6.97	6.89	185.49	51.6	17.1	859.9	10.52	10.72	0.20	1.78		0.80	2.5	0.33	0.3	
	10/12/2017 11:03	5.94	4.26	189.75	61.6	10.0	869.9	11.05	16.60	5.55	2.31		0.80	2.3	0.31	0.3	
	10/19/2017 11:15	7.01	1.82	191.57	68.1	6.5	876.4	9.65	14.55	4.90	0.91		0.80	3.6	0.48	0.4	
	11/2/2017 8:41	13.89	13.08	204.66	121.6	53.5	929.9	11.30	11.36	0.06	2.56		0.80	4.1	0.55	0.5	
	11/8/2017 12:02	6.14	6.14	210.80	139.6	18.0	947.9	11.22	11.51	0.29	2.48		0.80	2.9	0.39	0.4	
	11/15/2017 11:17	6.97	1.64	212.44	143.6	4.0	951.9	10.95	15.42	4.47	2.21		0.80	2.4	0.33	0.3	
	11/22/2017 10:11	6.95	6.95	219.39	169.6	26.0	977.9	11.80	11.95	0.15	3.06		0.80	3.7	0.50	0.5	
	11/30/2017 10:55	8.03	7.91	227.30	184.6	15.0	992.9	12.30	12.52	0.22	3.56		0.80	1.9	0.25	0.2	
	12/6/2017 11:28	6.02	3.86	231.16	195.0	10.4	1003.3	10.65	14.32	3.67	1.91		0.80	2.7	0.36	0.3	
	12/13/2017 10:32	6.96	6.96	238.12	220.3	25.3	1028.6	12.54	12.76	0.22	3.80		0.80	3.6	0.49	0.4	
	12/21/2017 12:38	8.09	7.96	246.08	245.3	25.0	1053.6	11.63	11.73	0.10	2.89		0.80	3.1	0.42	0.4	
	12/28/2017 13:15	7.03	7.03	253.10	265.3	20.0	1073.6	12.40	12.65	0.25	3.66		0.80	2.8	0.38	0.3	
	1/5/2018 13:37	8.02	7.89	260.99	291.3	26.0	1099.6	11.61	11.69	0.08	2.87		0.80	3.3	0.44	0.4	
	1/12/2018 12:46	6.96	6.96	267.96	305.3	14.0	1113.6	12.71	12.94	0.23	3.97		0.80	2.0	0.27	0.2	
	1/19/2018 14:15	7.06	7.05	275.01	328.3	23.0	1136.6	11.80	11.98	0.18	3.06		0.80	3.3	0.44	0.4	
	1/26/2018 11:05	6.87	6.78	281.79	352.3	24.0	1160.6	12.97	13.65	0.68	4.23		0.80	3.5	0.47	0.4	
	2/1/2018 11:48	6.03	6.03	287.82	362.3	10.0	1170.6	11.54	11.63	0.09	2.80		0.80	1.7	0.22	0.2	
	2/7/2018 8:16	5.85	5.85	293.67	374.3	12.0	1182.6	12.82	13.14	0.32	4.08		0.80	2.1	0.27	0.3	
	2/15/2018 10:45	8.10	8.02	301.69	392.3	18.0	1200.6	11.80	12.01	0.21	3.06		0.80	2.2	0.30	0.3	
	2/22/2018 13:20	7.11	7.09	308.78	412.3	20.0	1220.6	11.92	12.10	0.18	3.18		0.80	2.8	0.38	0.3	
	2/28/2018 8:02	5.78	5.64	314.42	426.3	14.0	1234.6	11.18	11.39	0.21	2.44		0.80	2.5	0.33	0.3	
	3/8/2018 8:27	8.02	8.02	322.44	434.3	8.0	1242.6	11.89	16.41	4.52	3.15		0.80	1.0	0.13	0.1	
	3/15/2018 12:30	7.17	7.15	329.58	434.3	0.0	1242.6	11.66	15.22	3.56	2.92		0.80	0.0	0.00	0.0	
	3/22/2018 10:25	6.91	0.00	329.59	434.3	0.0	1242.6	12.12	16.27	4.15	3.38		0.80	0.0	0.00	0.0	
	3/29/2018 10:50	7.02	6.87	336.46	455.3	21.0	1263.6	11.60	11.92	0.32	2.86		0.80	3.1	0.41	0.4	
	4/6/2018 10:48	8.00	8.00	344.46	476.3	21.0	1284.6	12.61	12.85	0.24	3.87		0.80	2.6	0.35	0.3	
	4/12/2018 11:55	6.05	6.05	350.50	489.8	13.5	1298.1	12.60	12.82	0.22	3.86		0.80	2.2	0.30	0.3	
	4/18/2018 14:15	6.10	6.10	356.60	510.7	20.9	1319.0	12.11	12.23	0.12	3.37		0.80	3.4	0.46	0.4	
	4/27/2018 14:15	9.00	7.97	364.57	527.4	16.7	1335.7	12.35	13.00	0.65	3.61		0.80	2.1	0.28	0.3	
	5/3/2018 15:15	6.04	5.96	370.53	541.9	14.5	1350.2	12.16	12.35	0.19	3.42		0.80	2.4	0.33	0.3	
	5/9/2018 11:22	5.84	5.84	376.36	557.3	15.4	1365.6	12.81	13.07	0.26	4.07		0.80	2.6	0.35	0.3	
	5/17/2018 12:34	8.05	8.05	384.41	576.3	19.0	1384.6	11.60	11.86	0.26	2.86		0.80	2.4	0.32	0.3	
	5/25/2018 13:26	8.04	7.91	392.32	596.3	20.0	1404.6	12.74	12.99	0.25	4.00		0.80	2.5	0.34	0.3	
	5/31/2018 9:38	5.84	5.84	398.16	610.6	14.3	1418.9	11.61	11.75	0.14	2.87		0.80	2.4	0.33	0.3	
	6/7/2018 13:00	7.14	7.14	405.30	629.9	19.3	1438.2	11.88	12.12	0.24	3.14		0.80	2.7	0.36	0.3	
	6/14/2018 11:20	6.93	6.80	412.10	648.7	18.8	1457.0	11.09	11.31	0.22	2.35		0.80	2.8	0.37	0.3	
	6/22/2018 13:37	8.10	8.10	420.20	672.9	24.2	1481.2	12.26	12.68	0.42	3.52		0.80	3.0	0.40	0.4	
	6/28/2018 9:53	5.84	5.84	426.04	686.8	13.9	1495.1	11.28	11.39	0.11	2.54		0.80	2.			

## Appendix A

**AW-56 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-56 Long-Term Test	7/19/2018 11:11	9.85	9.73	446.84	745.8	26.5	1554.1	11.99	12.15	0.16	3.25		0.80	2.7	0.36	0.3	
	7/25/2018 11:08	6.00	6.00	452.84	760.3	14.5	1568.6	11.34	11.52	0.18	2.60		0.80	2.4	0.32	0.3	
	8/1/2018 10:05	6.96	6.96	459.79	776.3	16.0	1584.6	11.48	13.48	2.00	2.74		0.80	2.3	0.31	0.3	
	8/9/2018 10:12	8.00	7.88	467.67	810.3	34.0	1618.6	13.33	13.51	0.18	4.59		0.80	4.3	0.58	0.5	
	8/16/2018 10:34	7.02	7.02	474.68	829.3	19.0	1637.6	12.09	12.31	0.22	3.35		0.80	2.7	0.36	0.3	
	8/23/2018 11:08	7.02	7.02	481.71	850.3	21.0	1658.6	11.62	11.73	0.11	2.88		0.80	3.0	0.40	0.4	
	8/30/2018 10:48	6.99	6.85	488.56	851.3	1.0	1659.6	11.11	14.82	3.71	2.37		0.80	0.1	0.02	0.0	
	9/5/2018 10:26	5.98	5.98	494.55	861.3	10.0	1669.6	11.63	14.80	3.17	2.89		0.80	1.7	0.22	0.2	
	9/14/2018 13:08	9.11	8.99	503.53	891.5	30.2	1699.8	11.03	11.19	0.16	2.29		0.80	3.4	0.45	0.4	
	9/21/2018 11:40	6.94	6.94	510.47	905.8	14.3	1714.1	12.04	12.31	0.27	3.30		0.80	2.1	0.28	0.3	
	9/25/2018 12:38	4.04	4.04	514.51	915.3	9.5	1723.6	11.25	11.36	0.11	2.51		0.80	2.4	0.31	0.3	
	10/4/2018 11:30	8.95	8.83	523.34	939.3	24.0	1747.6	12.31	12.65	0.34	3.57		0.80	2.7	0.36	0.3	
	10/10/2018 10:28	5.96	5.96	529.29	954.9	15.6	1763.2	10.84	10.89	0.05	2.10		0.80	2.6	0.35	0.3	
	10/17/2018 8:32	6.92	6.92	536.21	969.8	14.9	1778.1	11.45	11.57	0.12	2.71		0.80	2.2	0.29	0.3	
	10/23/2018 12:14	6.15	6.02	542.23	982.8	13.0	1791.1	11.01	13.99	2.98	2.27		0.80	2.2	0.29	0.3	
	11/1/2018 10:16	8.92	8.92	551.15	1010.3	27.5	1818.6	12.50	12.78	0.28	3.76		0.80	3.1	0.41	0.4	
	11/8/2018 14:33	7.18	7.09	558.24	1027.7	17.4	1836.0	12.05	12.34	0.29	3.31		0.80	2.5	0.33	0.3	

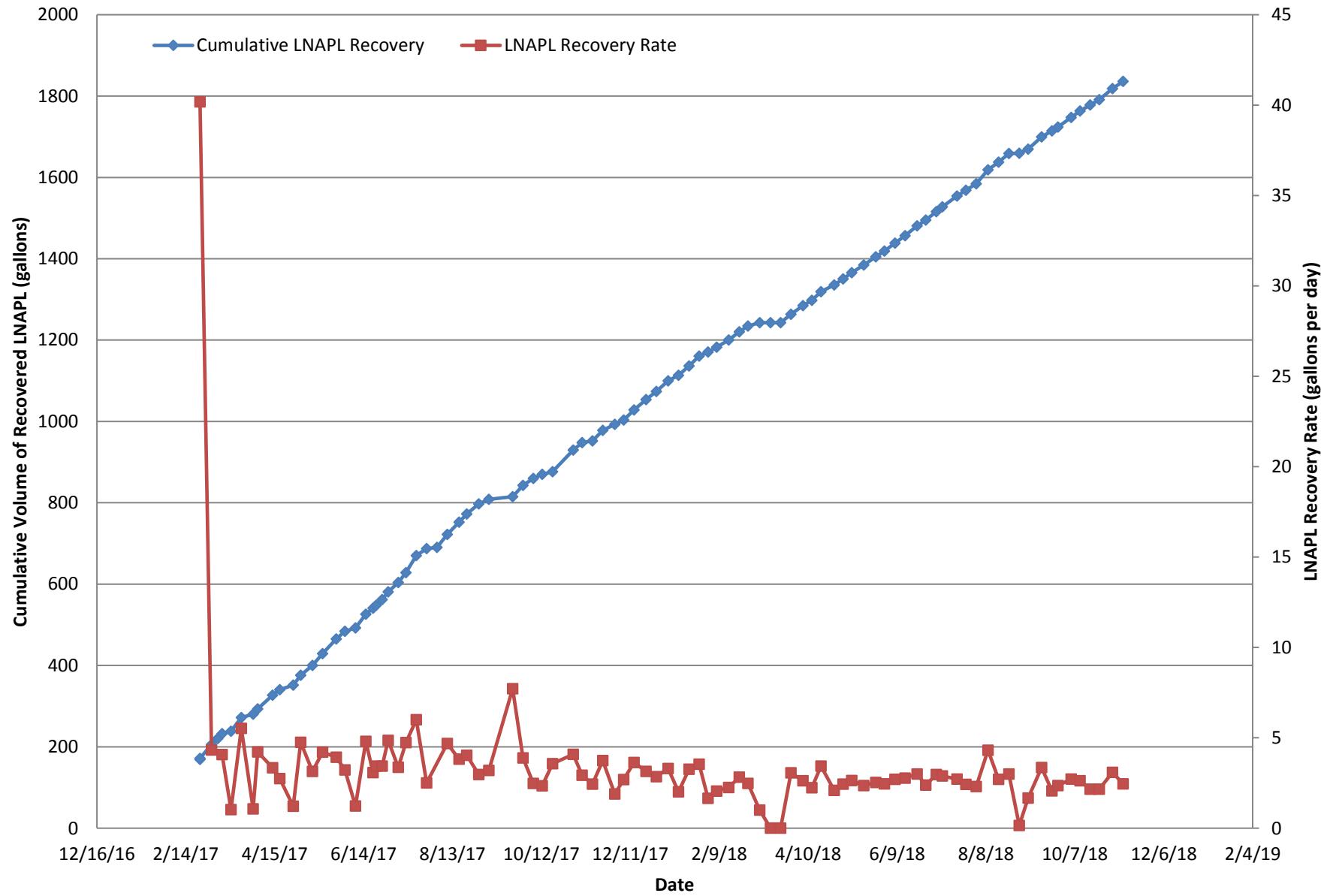
0.854

Assumed LNAPL specific gravity =

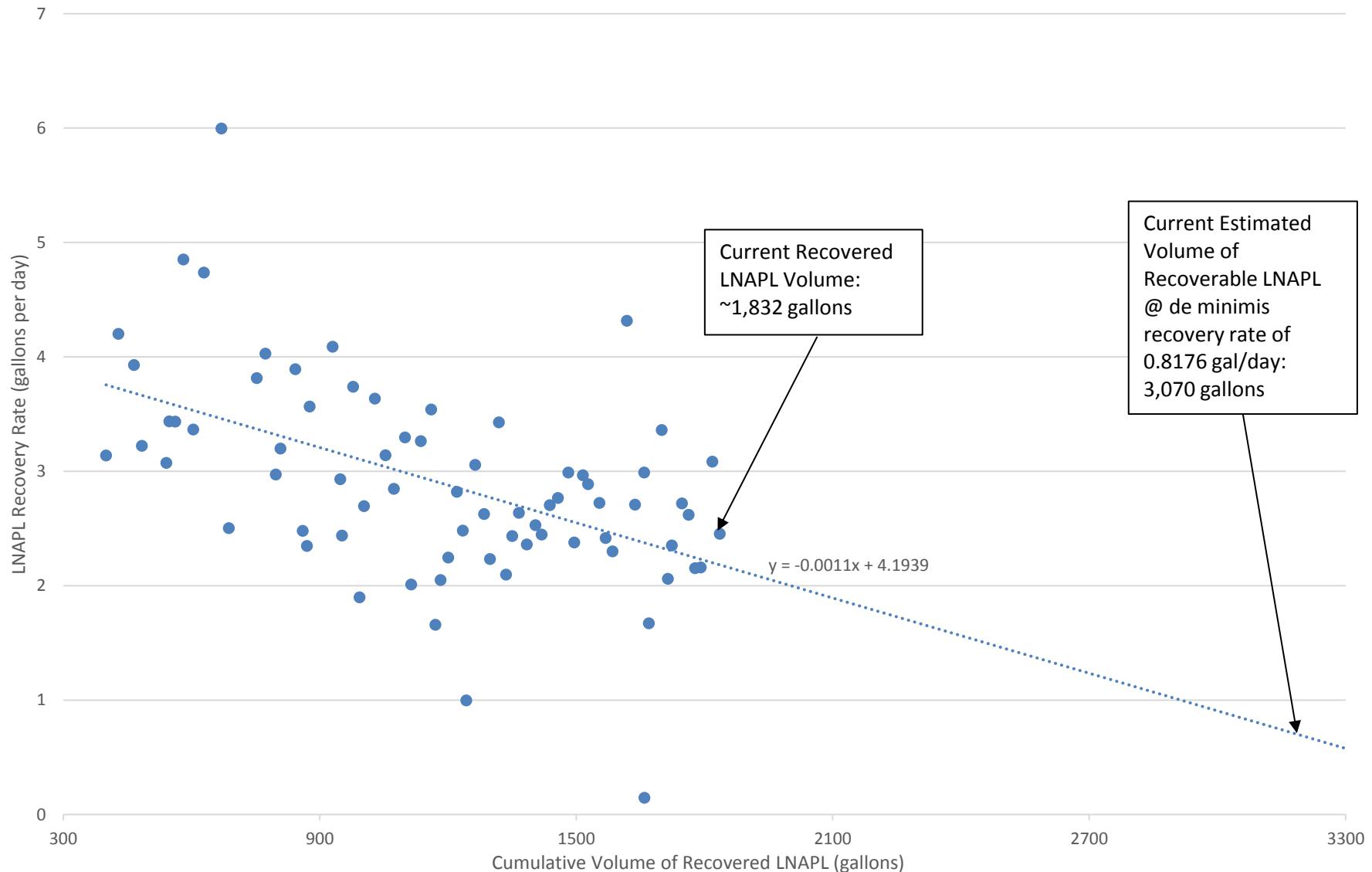
All calculations performed pursuant to the methodology detailed in ASTM E2856-13

<sup>a</sup>The maximum theoretical drawdown is used for each interval calculation where the measured drawdown is negative or where it exceeds the theoretical maximum.<sup>b</sup>Represents the geometric mean of the stabilized recovery rates/LNAPL transmissivity estimates (i.e., excludes initial elevated values that would not represent potential long-term recovery rates).

## AW-56: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time

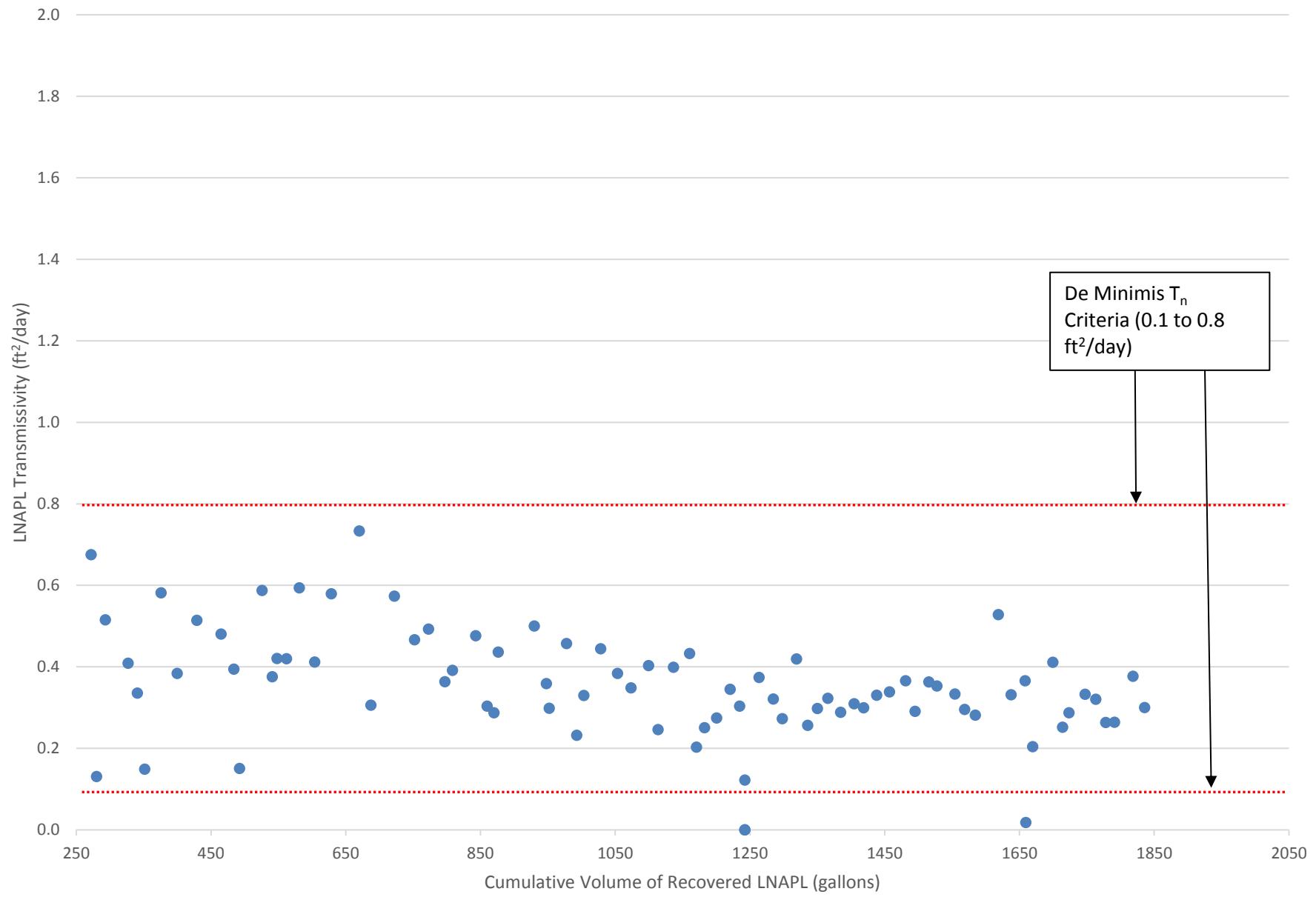


## AW-56: LNAPL Volumetric Recovery Decline Curve Analysis



Note: Only data following stabilization of LNAPL recovery and during intervals without skimmer operation issues are depicted and were utilized to develop the recovery decline curve analysis

## AW-56: LNAPL Transmissivity Decline Curve Analysis



## Appendix A

**AW-82 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium							9.58	12.46	2.88	--	0.42		--	--	--	
AW-82 Short Term Test	6/28/2016 11:00	--	--	--	--	--		9.11	12.62	3.51	--		--	--	--	--	
	6/28/2016 14:15	0.14	0.13	0.13	4.1	4.1	4.1	--	--	--			0.42	30.4	4.07	7.1	
	7/1/2016 9:25	2.80	2.78	2.92	6.0	1.9	6.0	8.89	12.33	3.44	-0.69		0.42	0.7	0.09	0.2	
	7/7/2016 13:10	6.16	6.16	9.08	12.3	6.3	12.3	9.27	12.42	3.15	-0.31		0.42	1.0	0.14	0.2	
	7/11/2016 12:00	3.95	2.24	11.31	22.7	10.4	22.7	9.66	13.36	3.70	0.08		0.42	4.7	0.62	1.1	
	7/12/2016 9:35	0.90	0.65	11.96	26.0	3.3	26.0	9.63	12.65	3.02	0.05		0.42	5.1	0.68	1.2	
	7/12/2016 12:25	0.12	0.12	12.08	26.4	0.4	26.4	9.82	12.74	2.92	0.24		0.42	3.4	0.45	0.8	
	7/19/2016 12:00	6.98	6.98	19.06	49.7	23.3	49.7	9.69	12.56	2.87	0.11		0.42	3.3	0.45	0.8	
	7/21/2016 13:45	2.07	2.02	21.08	57.8	8.1	57.8	9.53	12.85	3.32	-0.05		0.42	4.0	0.53	0.9	
	7/27/2016 11:25	5.90	5.84	26.93	79.1	21.3	79.1	10.00	13.00	3.00	0.42		0.42	3.6	0.49	0.8	0.6
	<b>END OF TEST INTERVAL</b>																
	11/16/2016 10:05	--	--	--	--	--		9.04	11.81	2.77	--		--	--	--	--	
	11/22/2016 11:20	6.05	5.94	5.94	16.2	16.2	95.3	10.82	10.96	0.14	1.24		0.42	2.7	0.36	0.6	
	11/29/2016 11:55	7.02	7.02	12.96	42.1	25.9	121.2	10.29	11.80	1.51	0.71		0.42	3.7	0.49	0.9	
	12/5/2016 11:55	6.00	5.77	18.73	80.9	38.8	160.0	10.56	11.30	0.74	0.98		0.42	6.7	0.90	1.6	
	12/7/2016 12:10	2.01	2.00	20.73	89.0	8.1	168.1	10.54	10.92	0.38	0.96		0.42	4.0	0.54	0.9	
	12/14/2016 9:10	6.88	6.82	27.55	104.3	15.4	183.4	10.45	10.58	0.13	0.87		0.42	2.3	0.30	0.5	
	12/21/2016 8:48	6.98	6.94	34.50	114.1	9.7	193.2	10.45	11.40	0.95	0.87		0.42	1.4	0.19	0.3	
	12/27/2016 11:40	6.12	6.00	40.50	125.3	11.2	204.4	10.37	10.56	0.19	0.79		0.42	1.9	0.25	0.4	
	1/4/2017 10:46	7.96	7.92	48.41	150.1	24.8	229.2	11.14	11.56	0.42	1.56		0.42	3.1	0.42	0.7	
	1/9/2017 11:04	5.01	4.80	53.21	165.3	15.2	244.4	10.87	10.96	0.09	1.29		0.42	3.2	0.42	0.7	
	1/19/2017 9:45	9.95	9.81	63.02	190.7	25.4	269.8	11.10	11.28	0.18	1.52		0.42	2.6	0.35	0.6	0.7
	<b>END OF TEST INTERVAL</b>																
AW-82 Long Term Test	4/27/2017 11:50	--	--	0.00	--	--	--	9.97	13.02	3.05	--		--	--	--	--	
	5/2/2017 13:01	5.05	5.05	5.05	119.0	119.0	388.8	11.23	11.38	0.15	1.65		0.42	23.6	3.15	5.5	
	5/10/2017 10:17	7.89	7.89	12.94	194.0	75.0	463.8	10.85	12.26	1.41	1.27		0.42	9.5	1.27	2.2	
	5/17/2017 7:24	6.88	6.88	19.82	246.0	52.0	515.8	10.93	11.09	0.16	1.35		0.42	7.6	1.01	1.8	
	5/26/2017 10:34	9.13	9.13	28.95	306.0	60.0	575.8	10.96	11.15	0.19	1.38		0.42	6.6	0.88	1.5	
	6/1/2017 7:34	5.88	5.88	34.82	327.0	21.0	596.8	10.61	10.80	0.19	1.03		0.42	3.6	0.48	0.8	
	6/8/2017 11:05	7.15	6.88	41.70	352.0	25.0	621.8	10.31	10.45	0.14	0.73		0.42	3.6	0.49	0.8	
	6/15/2017 10:20	6.97	6.97	48.67	367.9	15.9	637.7	10.81	10.98	0.17	1.23		0.42	2.3	0.30	0.5	
	6/22/2017 11:00	7.03	7.03	55.70	392.9	25.0	662.7	10.48	10.63	0.15	0.90		0.42	3.6	0.48	0.8	
	6/26/2017 12:38	4.07	4.07	59.77	406.0	13.1	675.8	10.51	10.66	0.15	0.93		0.42	3.2	0.43	0.8	
	6/30/2017 12:34	4.00	4.00	63.76	459.5	53.5	729.3	10.56	11.45	0.89	0.98		0.42	13.4	1.79	3.1	
	7/7/2017 7:55	6.81	5.40	69.17	469.0	9.5	738.8	10.00	10.90	0.90	0.42		0.42	1.8	0.23	0.4	
	7/12/2017 15:11	5.30	5.30	74.47	486.8	17.8	756.6	10.08	10.16	0.08	0.50		0.42	3.4	0.45	0.8	
	7/19/2017 11:52	6.86	6.59	81.06	497.0	10.2	766.8	10.15	10.24	0.09	0.57		0.42	1.5	0.21	0.4	
	7/26/2017 11:35	6.99	6.99	88.05	540.9	43.9	810.7	10.04	10.06	0.02	0.46		0.42	6.3	0.84	1.5	
	8/2/2017 12:26	7.04	7.04	95.08	549.0	8.1	818.8	9.70	9.91	0.21	0.12		0.42	1.2	0.15	0.3	
	8/9/2017 10:03	6.90	6.90	101.98	552.0	3.0	821.8	9.75	9.90	0.15	0.17		0.42	0.4	0.06	0.1	
	8/17/2017 8:21	7.93	7.93	109.91	554.0	2.0	823.8										

## Appendix A

**AW-82 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																	
AW-82 Long-Term Test	9/21/2017 11:28	--	--	--	--	--	843.8	8.59	10.61	2.02	--		--	--	--	--	
	9/22/2017 8:51	0.89	0.89	130.79	12.3	12.3	856.1	9.35	9.41	0.06	-0.23		0.42	13.8	1.85	3.2	
	9/29/2017 12:35	7.16	7.16	137.95	22.7	10.4	866.5	9.54	9.70	0.16	-0.04		0.42	1.5	0.19	0.3	
	10/6/2017 12:23	6.99	0.74	138.69	46.4	23.7	890.2	9.05	10.36	1.31	-0.53		0.42	32.0	4.27	7.5	
	10/12/2017 10:45	5.93	5.93	144.62	56.4	10.0	900.2	9.75	9.92	0.17	0.17		0.42	1.7	0.23	0.4	
	10/19/2017 11:30	7.03	7.03	151.65	58.5	2.1	902.3	9.27	9.39	0.12	-0.31		0.42	0.3	0.04	0.1	
	11/2/2017 8:34	13.88	8.91	160.56	67.7	9.2	911.5	10.20	10.44	0.24	0.62		0.42	1.0	0.14	0.2	
	11/8/2017 11:50	6.14	6.14	166.69	67.7	0.0	911.5	10.06	10.29	0.23	0.48		0.42	0.0	0.00	0.0	
	11/15/2017 11:01	6.97	6.97	173.66	67.7	0.0	911.5	9.87	10.50	0.63	0.29		0.42	0.0	0.00	0.0	
	11/22/2017 10:09	6.96	6.96	180.62	77.7	10.0	921.5	10.53	10.79	0.26	0.95		0.42	1.4	0.19	0.3	
	11/30/2017 11:40	8.06	7.84	188.46	87.7	10.0	931.5	10.41	10.68	0.27	0.83		0.42	1.3	0.17	0.3	
	12/6/2017 13:00	6.06	6.06	194.52	97.5	9.8	941.3	10.13	10.38	0.25	0.55		0.42	1.6	0.22	0.4	
	12/13/2017 10:10	6.88	3.79	198.31	104.3	6.8	948.1	10.22	12.18	1.96	0.64		0.42	1.8	0.24	0.4	
	12/21/2017 12:03	8.08	8.08	206.39	116.7	12.4	960.5	10.31	12.17	1.86	0.73		0.42	1.5	0.21	0.4	
	12/28/2017 13:35	7.06	7.06	213.45	124.5	7.8	968.3	10.97	11.20	0.23	1.39		0.42	1.1	0.15	0.3	
	1/5/2018 13:18	7.99	7.75	221.21	124.5	0.0	968.3	10.74	10.98	0.24	1.16		0.42	0.0	0.00	0.0	
	1/12/2018 13:35	7.01	7.00	228.21	160.0	35.5	1003.8	10.76	10.98	0.22	1.18		0.42	5.1	0.68	1.2	
	1/19/2018 12:44	6.96	6.96	235.17	165.5	5.5	1009.3	10.65	10.90	0.25	1.07		0.42	0.8	0.11	0.2	
	1/26/2018 10:57	6.93	6.93	242.10	176.7	11.2	1020.5	11.30	11.36	0.06	1.72		0.42	1.6	0.22	0.4	
	2/1/2018 11:28	6.02	6.02	248.12	182.9	6.2	1026.7	10.66	10.90	0.24	1.08		0.42	1.0	0.14	0.2	
	2/7/2018 8:07	5.86	5.62	253.74	196.9	14.0	1040.7	10.83	11.13	0.30	1.25		0.42	2.5	0.33	0.6	
	2/15/2018 11:35	8.14	8.14	261.88	227.9	31.0	1071.7	10.23	10.64	0.41	0.65		0.42	3.8	0.51	0.9	
	2/22/2018 12:50	7.05	2.56	264.44	258.9	31.0	1102.7	10.48	12.24	1.76	0.90		0.42	12.1	1.62	2.8	
	2/28/2018 10:07	5.89	0.00	264.44	258.9	0.0	1102.7	9.85	12.17	2.32	0.27		0.42	0.0	0.00	0.0	
	3/8/2018 8:20	7.93	7.93	272.36	272.9	14.0	1116.7	10.67	10.89	0.22	1.09		0.42	1.8	0.24	0.4	
	3/15/2018 12:40	7.18	7.18	279.54	286.9	14.0	1130.7	10.75	10.96	0.21	1.17		0.42	1.9	0.26	0.5	
	3/22/2018 10:58	6.93	6.93	286.47	303.9	17.0	1147.7	11.40	11.61	0.21	1.82		0.42	2.5	0.33	0.6	
	3/29/2018 10:57	7.00	6.76	293.24	317.9	14.0	1161.7	10.60	10.78	0.18	1.02		0.42	2.1	0.28	0.5	
	4/6/2018 10:55	8.00	8.00	301.23	330.9	13.0	1174.7	11.14	11.39	0.25	1.56		0.42	1.6	0.22	0.4	
	4/12/2018 12:10	6.05	6.05	307.29	344.9	14.0	1188.7	10.94	11.20	0.26	1.36		0.42	2.3	0.31	0.5	
	4/18/2018 13:03	6.04	6.04	313.32	367.9	23.0	1211.7	10.09	10.34	0.25	0.51		0.42	3.8	0.51	0.9	
	4/27/2018 13:01	9.00	7.77	321.09	379.9	12.0	1223.7	10.57	10.81	0.24	0.99		0.42	1.5	0.21	0.4	
	5/3/2018 15:24	6.10	6.10	327.19	386.9	7.0	1230.7	10.70	10.88	0.18	1.12		0.42	1.1	0.15	0.3	
	5/9/2018 11:31	5.84	5.84	333.03	397.4	10.5	1241.2	10.95	11.15	0.20	1.37		0.42	1.8	0.24	0.4	
	5/17/2018 12:41	8.05	8.05	341.08	410.9	13.5	1254.7	10.58	10.76	0.18	1.00		0.42	1.7	0.22	0.4	
<b>END OF TEST INTERVAL - SYSTEM DOWN DUE TO MALFUNCTION</b>																	

## Appendix A

**AW-82 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
AW-82 Long Term Test	6/7/2018 13:00	--	0.00	0.00	--	--	1254.7	10.20	10.70	0.50	0.62		0.42	--	--	--	
	6/7/2018 14:31	0.06	0.02	0.02	0.5	0.5	1255.2	10.16	10.32	0.16	0.58		0.42	31.0	4.14	7.2	
	6/14/2018 11:28	6.87	6.87	6.89	1.0	0.5	1255.7	9.85	10.01	0.16	0.27		0.42	0.1	0.01	0.0	
	6/22/2018 13:42	8.09	8.09	8.11	3.5	2.5	1258.2	10.31	10.50	0.19	0.73		0.42	0.3	0.04	0.1	
	6/28/2018 9:40	5.83	5.83	12.72	3.5	0.0	1258.2	9.97	10.25	0.28	0.39		0.42	0.0	0.00	0.0	
	7/5/2018 10:35	7.04	7.04	15.15	6.6	3.1	1261.3	10.24	10.48	0.24	0.66		0.42	0.4	0.06	0.1	
	7/9/2018 14:30	4.16	3.93	12.04	9.6	3.0	1264.3	10.20	10.31	0.11	0.62		0.42	0.8	0.10	0.2	
	7/19/2018 10:52	9.85	5.06	17.78	12.5	2.9	1267.2	10.00	10.32	0.32	0.42		0.42	0.6	0.08	0.1	
	7/25/2018 10:47	6.00	1.16	13.20	12.5	0.0	1267.2	9.45	10.61	1.16	-0.13		0.42	0.0	0.00	0.0	
	8/1/2018 9:46	6.96	6.96	24.74	20.5	8.0	1275.2	10.14	10.32	0.18	0.56		0.42	1.1	0.15	0.3	
	8/9/2018 9:58	8.01	8.01	21.21	21.5	1.0	1276.2	9.73	9.88	0.15	0.15		0.42	0.1	0.02	0.0	
	8/16/2018 10:16	7.01	4.65	29.39	23.5	2.0	1278.2	10.36	10.55	0.19	0.78		0.42	0.4	0.06	0.1	
	8/23/2018 10:51	7.02	6.80	28.01	30.5	7.0	1285.2	9.96	10.14	0.18	0.38		0.42	1.0	0.14	0.2	
	8/30/2018 10:56	7.00	7.00	36.39	39.0	8.5	1293.7	10.20	10.38	0.18	0.62		0.42	1.2	0.16	0.3	
	9/5/2018 10:15	5.97	5.97	33.99	41.5	2.5	1296.2	10.03	10.25	0.22	0.45		0.42	0.4	0.06	0.1	
	9/14/2018 13:26	9.13	9.13	45.52	44.7	3.2	1299.4	9.72	9.92	0.20	0.14		0.42	0.4	0.05	0.1	
	9/21/2018 12:00	6.94	6.72	40.71	47.0	2.3	1301.7	10.22	10.44	0.22	0.64		0.42	0.3	0.05	0.1	
	9/25/2018 12:57	4.04	4.04	49.56	53.2	6.2	1307.9	10.00	10.15	0.15	0.42		0.42	1.5	0.21	0.4	
	10/4/2018 11:15	8.93	8.93	49.64	54.6	1.4	1309.3	10.22	10.50	0.28	0.64		0.42	0.2	0.02	0.0	
	10/10/2018 10:17	5.96	5.96	55.52	56.1	1.5	1310.8	9.73	9.98	0.25	0.15		0.42	0.3	0.03	0.1	
	10/17/2018 8:26	6.92	6.92	56.56	57.3	1.2	1312.0	10.00	10.26	0.26	0.42		0.42	0.2	0.02	0.0	
	10/23/2018 12:49	6.18	5.96	61.48	58.3	1.0	1313.0	9.93	10.06	0.13	0.35		0.42	0.2	0.02	0.0	
	11/1/2018 10:04	8.89	8.89	65.45	60.0	1.7	1314.7	10.36	10.58	0.22	0.78		0.42	0.2	0.03	0.0	
	11/8/2018 14:27	7.18	7.18	68.66	60.6	0.6	1315.3	10.06	10.23	0.17	0.48		0.42	0.1	0.01	0.0	

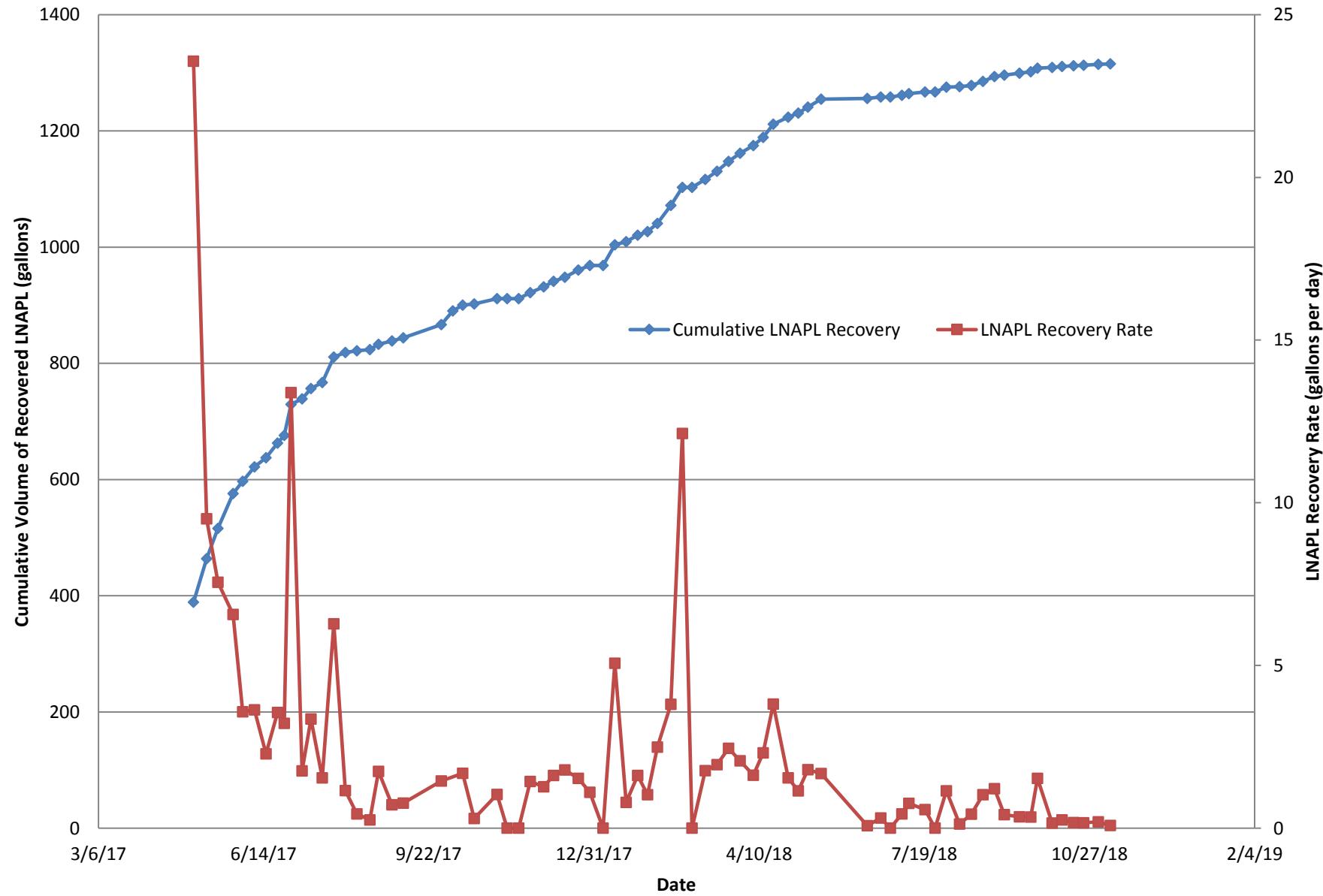
0.854

Assumed LNAPL specific gravity =

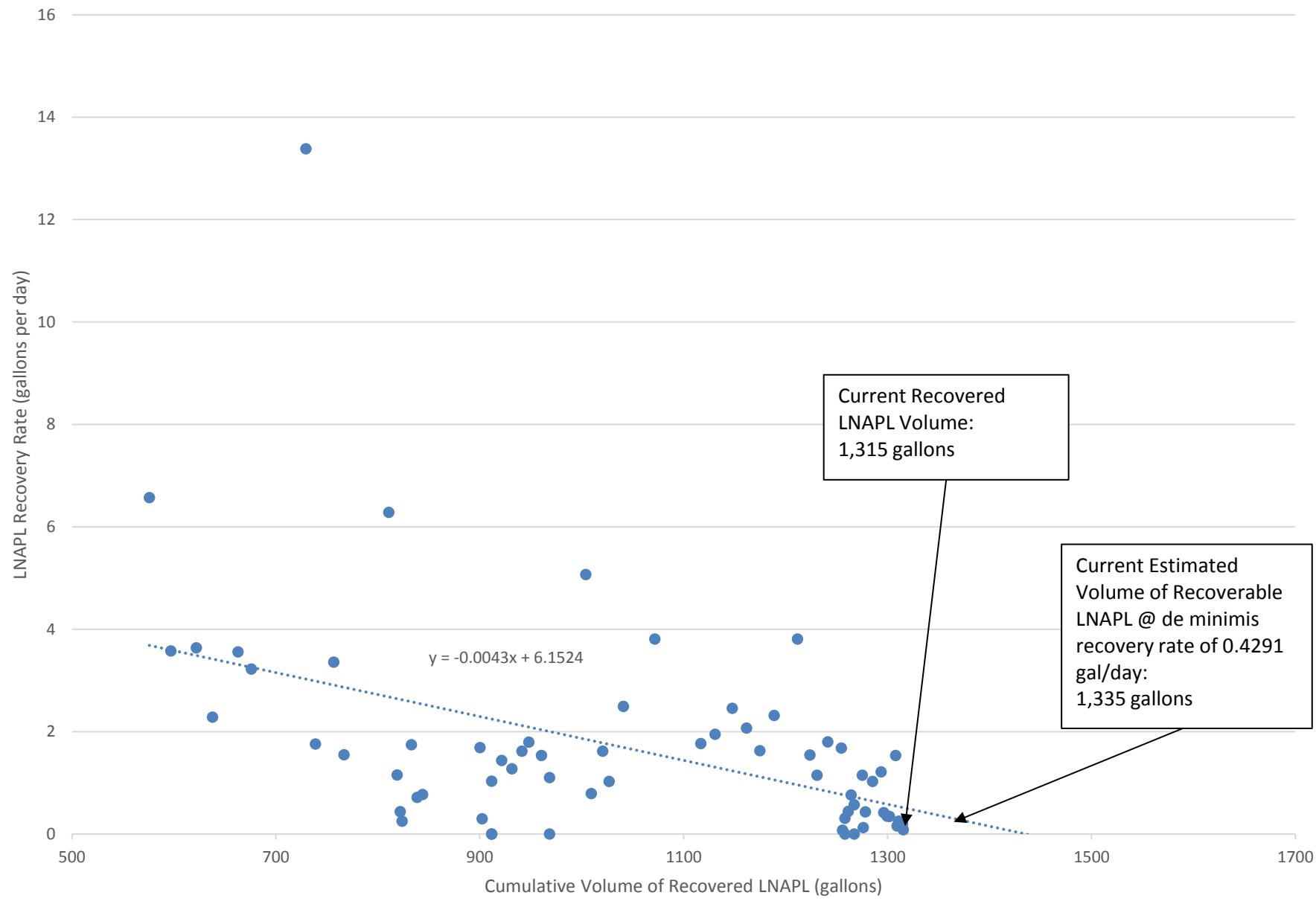
All calculations performed pursuant to the methodology detailed in ASTM E2856-13

<sup>a</sup>The maximum theoretical drawdown is used for each interval calculation where the measured drawdown is negative or where it exceeds the theoretical maximum.<sup>b</sup>Represents the geometric mean of the stabilized recovery rates/LNAPL transmissivity estimates (i.e., excludes initial elevated values that would not represent potential long-term recovery rates).

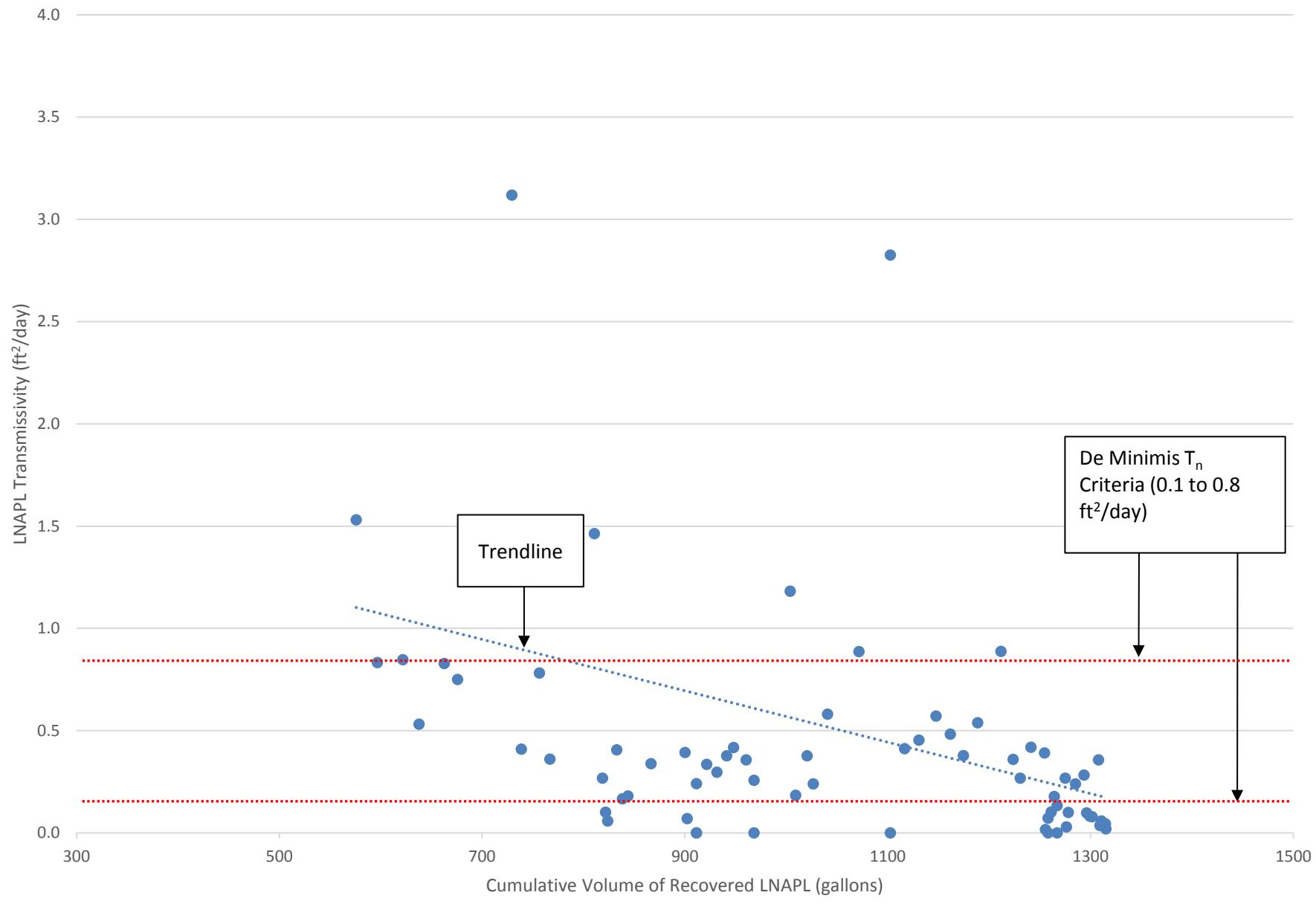
## AW-82: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-82: LNAPL Volumetric Recovery Decline Curve Analysis



## AW-82: LNAPL Transmissivity Decline Curve Analysis



## **Appendix B**

### **LNAPL Transmissivity Evaluation Summary Tables and Charts for Intermittent Skimming Wells**

## Appendix B

**AW-5 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run-Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Percentage of On-Time During Measurement Interval (%)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium	--		--	--	--		--	6.25	7.60	1.35	--	0.20	--	--	--	--	
AW-5 Short Term Test	9/22/2016 11:45	--		--	--	--		--	5.50	8.05	2.55	--	--	--	--	--	--	
	9/28/2016 10:00	5.93	5.93	5.93	29.0	29.0	29.0	101%	6.21	8.15	1.94	-0.04	0.20	4.9	0.65	2.4		
	10/5/2016 12:31	7.10	6.89	12.82	46.3	17.3	46.3	97%	6.55	7.41	0.86	0.30	0.20	2.5	0.33	1.2		
	<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																	
	11/16/2016 7:54	--		--	--	--		--	6.79	8.37	1.58	--	--	--	--	--		
	11/22/2016 10:46	6.12	5.50	18.31	50.1	50.1	96.4	90%	7.25	7.91	0.66	1.00	0.20	9.1	1.22	4.5		
	11/29/2016 11:25	7.03	1.05	19.36	55.0	4.9	101.2	15%	7.12	7.68	0.56	0.87	0.20	4.6	0.62	2.3		
	<b>END OF TEST INTERVAL - DUE TO SKIMMER MALFUNCTION</b>																	
	1/19/2017 13:26	--		--	--	--		--	6.25	7.09	0.84	--	--	--	--	--		
	1/23/2017 14:28	4.04	3.99	23.35	11.7	11.7	112.9	99%	5.76	6.00	0.24	-0.49	0.20	2.9	0.39	1.4		
1st Intermittent Skimming Event	1/26/2017 14:09	2.99	2.99	26.34	21.7	10.0	122.9	100%	5.82	5.90	0.08	-0.43	0.20	3.3	0.45	1.6		
	1/31/2017 12:02	4.91	3.48	29.82	26.2	4.5	127.4	71%	6.15	6.18	0.03	-0.10	0.20	1.3	0.17	0.6		
	2/7/2017 12:13	7.01	1.61	31.43	26.7	0.5	127.9	23%	6.28	6.95	0.67	0.03	0.20	0.3	0.04	0.2		
	2/13/2017 15:12	6.12	6.12	37.55	26.7	0.0	127.9	311%	6.09	6.22	0.13	-0.16	0.20	0.0	0.00	0.0		
	2/14/2017 13:50	0.94	0.21	37.76	26.7	0.0	127.9	22%	5.35	6.42	1.07	-0.90	0.20	0.0	0.00	0.0		
	2/23/2017 9:00	8.80	--	--	26.7	0.0	127.9	0%	6.34	6.99	0.65	0.09	0.20	0.0	0.00	0.0	0.20	
	<b>END OF TEST INTERVAL</b>																	
	8/30/2018 11:20	--		--	--	--		--	6.01	7.52	1.51	--	--	--	--	--		
1st Intermittent Skimming Event	8/30/2018 12:27	0.05	0.05	37.81	1.3	1.3	129.2	174%	6.49	6.76	0.27	0.24	0.20	27.9	3.73	13.7		
	9/5/2018 10:42	5.93	5.88	43.69	3.0	1.7	130.9	99%	6.60	6.71	0.11	0.35	0.20	0.3	0.04	0.1		
	9/14/2018 13:48	9.13	9.13	52.81	3.0	0.0	130.9	101%	6.14	6.16	0.02	-0.11	0.20	0.0	0.00	0.0		
	9/21/2018 13:15	6.98	6.98	59.79	3.0	0.0	130.9	100%	6.63	6.71	0.08	0.38	0.20	0.0	0.00	0.0		
	9/25/2018 13:17	4.00	4.00	63.79	3.0	0.0	130.9	101%	6.75	6.77	0.02	0.50	0.20	0.0	0.00	0.0		
	10/4/2018 11:40	8.93	8.76	72.55	3.0	0.0	130.9	98%	6.65	6.80	0.15	0.40	0.20	0.0	0.00	0.0		
	10/10/2018 10:37	5.96	5.96	78.51	3.0	0.0	130.9	101%	6.42	6.54	0.12	0.17	0.20	0.0	0.00	0.0		
	<b>END OF SKIMMING EVENT</b>																	

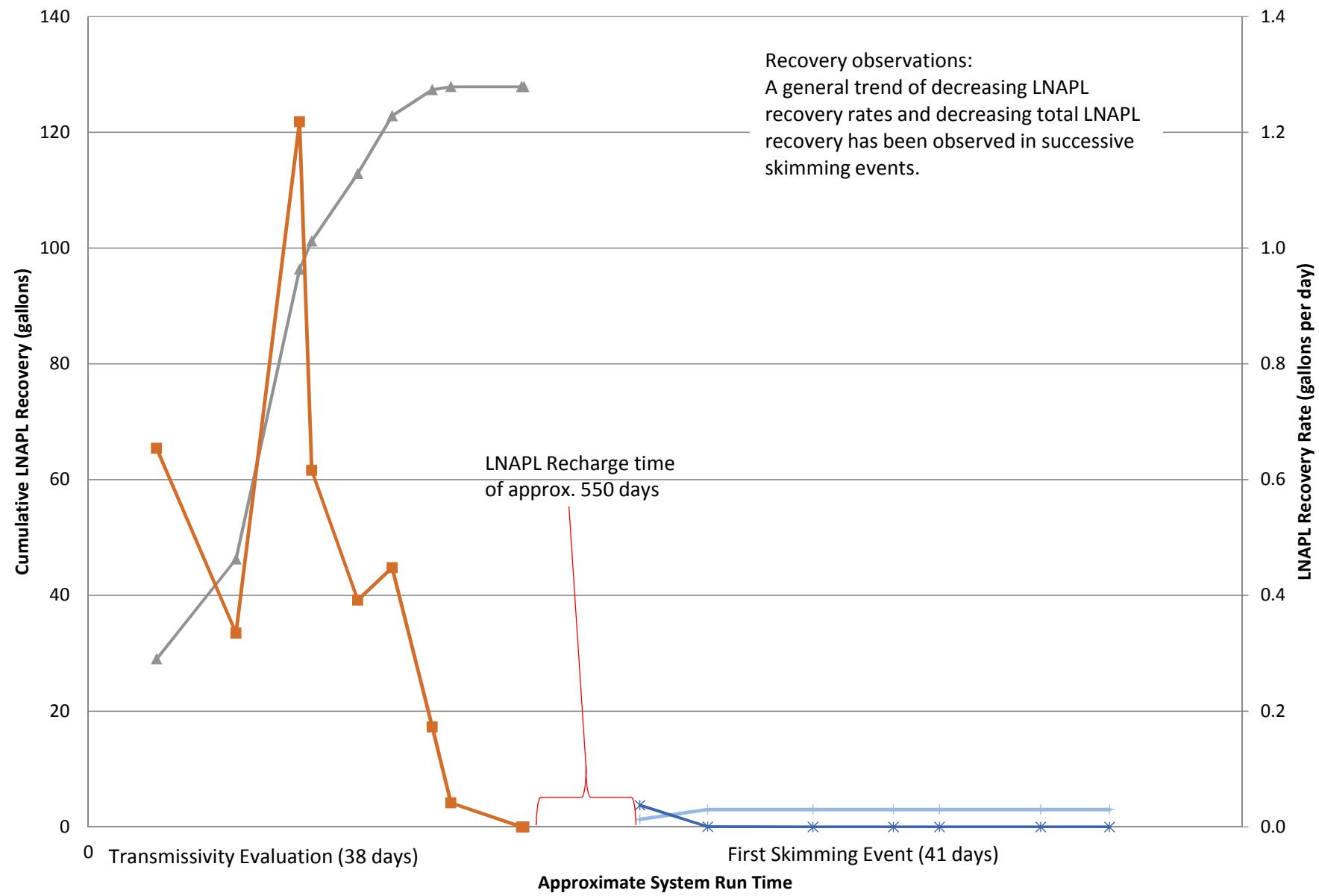
Assumed LNAPL specific gravity = 0.854

All calculations performed pursuant to the methodology detailed in ASTM E2856-13

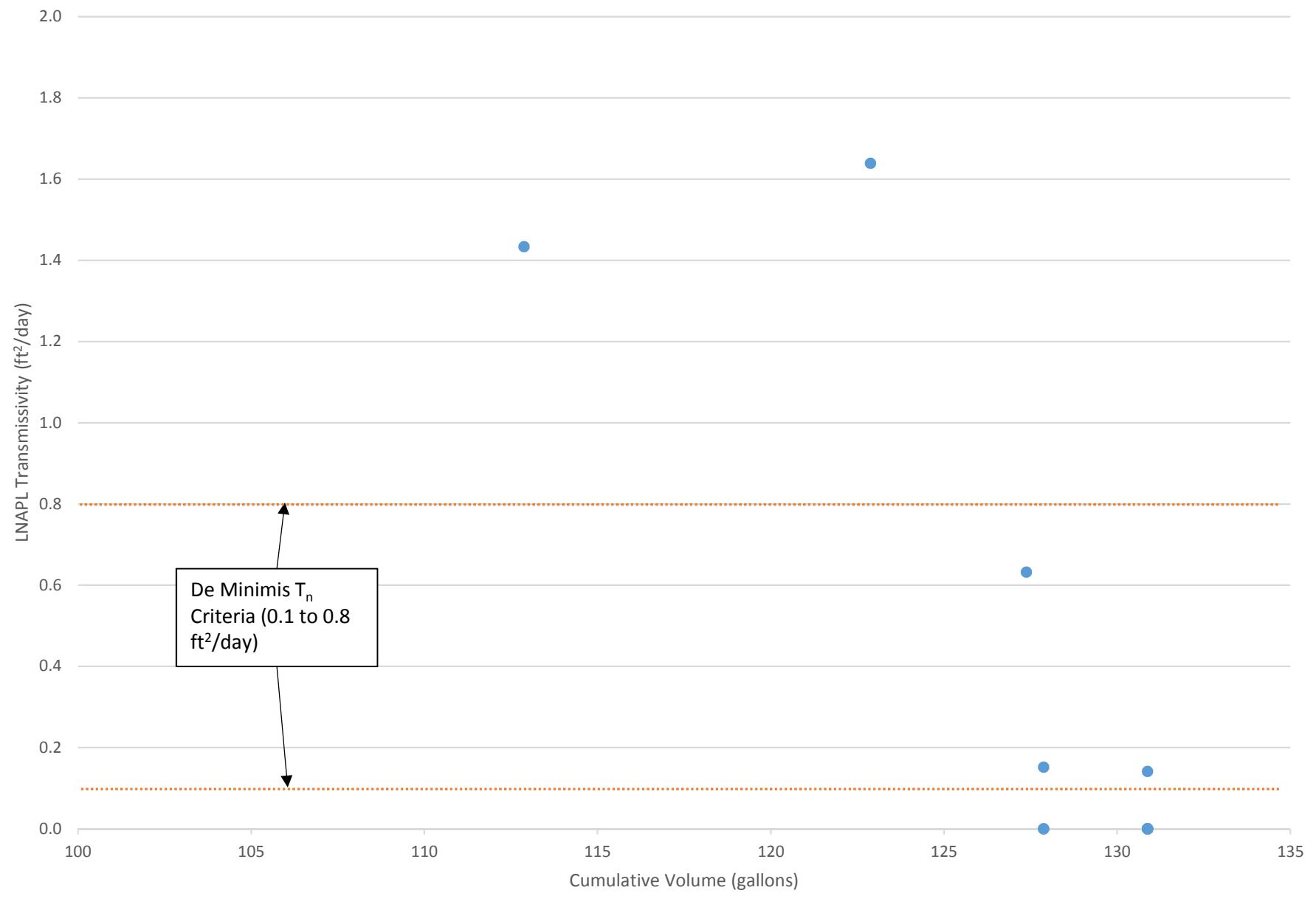
<sup>a</sup>The maximum theoretical drawdown is used for each interval calculation where the measured drawdown is negative or where it exceeds the theoretical maximum.<sup>b</sup>Represents the average of the stabilized recovery rates/LNAPL transmissivity estimates (i.e., excludes initial elevated values that would not represent potential long-term recovery rates).

Equilibrium data is an average of quarterly groundwater data collected from March 2016 through February 2018 and excludes data collected during skimming operations.

## AW-5: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



### AW-5: LNAPL Transmissivity Decline Curve Analysis

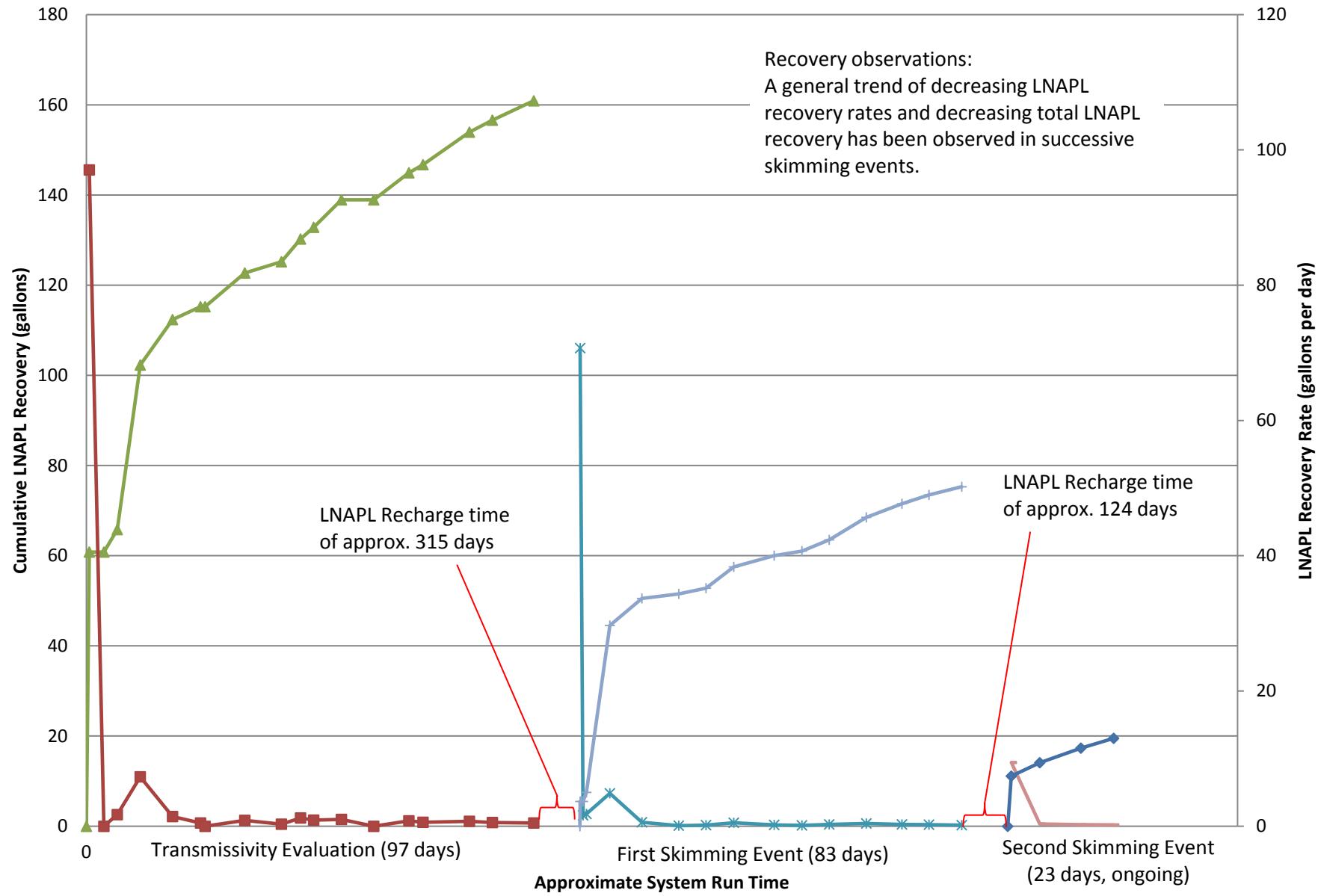


## Appendix B

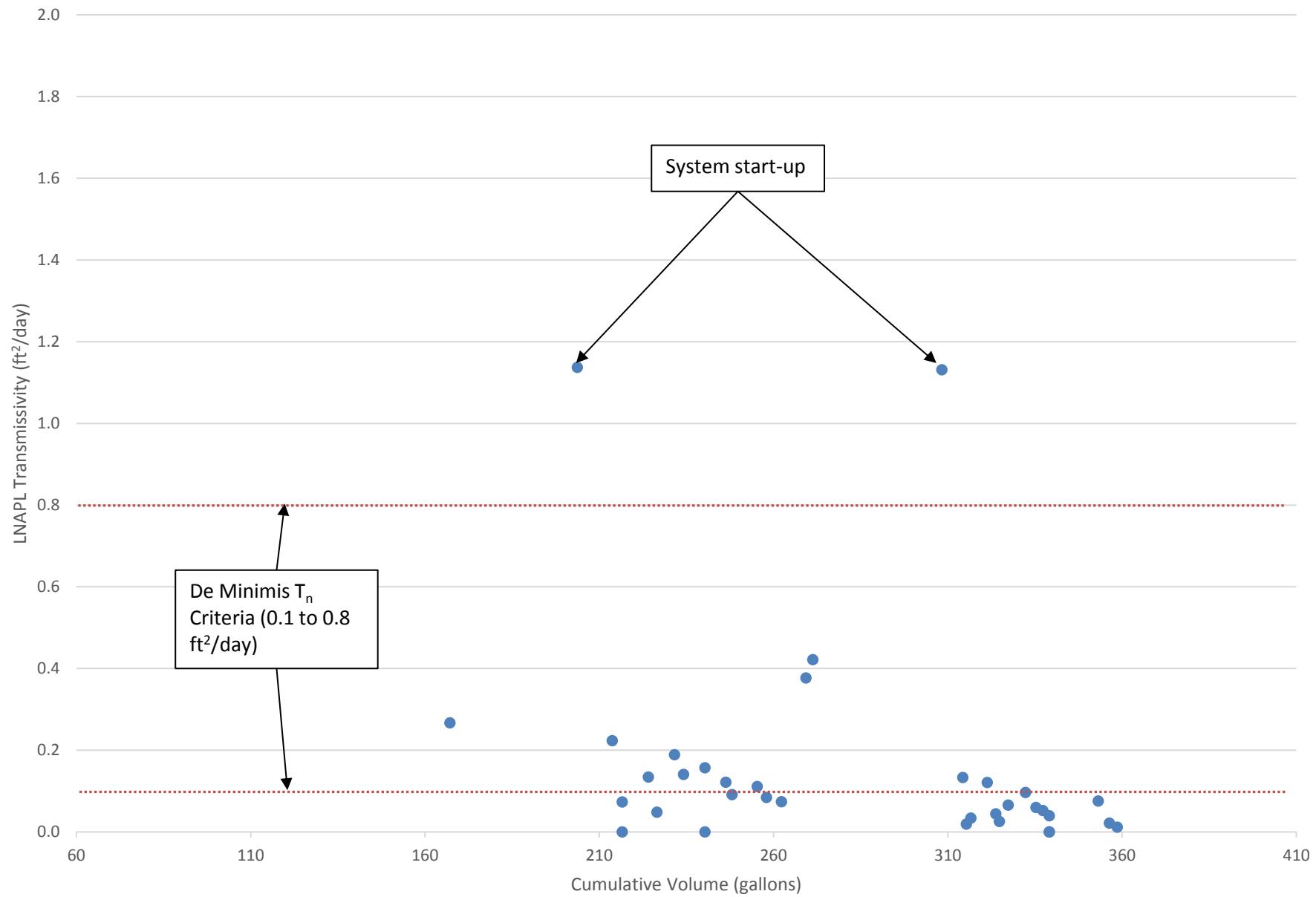
**AW-10 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered During Measurement Interval (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>2</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium	--	--	--	--	--	10.42	14.75	4.33	--	0.63	--	--	--	--	--	
AW-10 Short Term Test	6/28/2016 8:39	--	--	0.21	5.8	5.8	9.72	14.80	5.08	--	--	--	--	--	--	--	
	6/28/2016 13:50	0.22	0.21	3.03	16.8	11.0	16.8	10.29	11.06	0.77	-0.13	0.63	27.7	3.70	4.3		
	7/1/2016 9:25	2.82	2.82	9.19	40.2	23.4	40.2	10.72	10.92	0.20	0.30	0.63	3.9	0.52	0.6		
	7/7/2016 13:25	6.17	6.17	11.40	50.5	10.3	50.5	10.92	12.35	1.43	0.50	0.63	4.6	0.62	0.7		
	7/11/2016 13:06	3.99	2.21	12.08	54.3	3.8	54.3	10.87	12.55	1.68	0.45	0.63	5.6	0.74	0.9		
	7/12/2016 9:35	0.85	0.68	12.22	55.2	1.0	55.2	10.95	12.61	1.66	0.53	0.63	7.2	0.97	1.1		
	7/12/2016 12:50	0.14	0.14	19.17	69.2	14.0	69.2	10.51	14.15	3.64	0.09	0.63	2.0	0.27	0.3		
	7/19/2016 12:45	7.00	6.96	20.52	75.9	6.7	75.9	10.46	14.31	3.85	0.04	0.63	5.0	0.67	0.8		
	7/21/2016 13:00	2.01	1.34	25.72	101.4	25.5	101.4	10.52	13.93	3.41	0.10	0.63	4.9	0.65	0.8	0.8	
	7/27/2016 13:00	6.00	5.21	--	--	--	--	--	--	--	--	--	--	--	--	--	
AW-10 Long Term Test	1/19/2017 14:23	--	--	0.00	0.0	--	101.4	11.07	15.19	4.12	--	--	--	--	--	--	
	1/20/2017 10:25	0.83	0.63	0.63	60.8	60.8	162.2	11.94	11.95	0.01	1.52	0.63	97.0	12.97	15.1		
	1/23/2017 14:52	3.19	3.19	3.81	60.8	0.0	162.2	11.26	11.94	0.68	0.84	0.63	0.0	0.00	0.0		
	1/26/2017 12:40	2.91	2.91	6.72	65.8	5.0	167.2	10.87	11.05	0.18	0.45	0.63	1.7	0.23	0.3		
	1/31/2017 12:40	5.00	4.99	11.71	102.3	36.5	203.7	11.02	11.23	0.21	0.60	0.63	7.3	0.98	1.1		
	2/7/2017 12:28	6.99	6.99	18.70	112.4	10.1	213.7	11.19	11.27	0.08	0.77	0.63	1.4	0.19	0.2		
	2/13/2017 14:50	6.10	6.10	24.80	115.2	2.9	216.6	11.51	11.91	0.40	1.09	0.63	0.5	0.06	0.1		
	2/14/2017 14:30	0.99	0.99	25.78	115.2	0.0	216.6	11.31	11.56	0.25	0.89	0.63	0.0	0.00	0.0		
	2/23/2017 10:43	8.84	8.62	34.41	122.7	7.5	224.1	11.30	11.55	0.25	0.88	0.63	0.9	0.12	0.1		
	3/3/2017 9:50	7.96	7.96	42.37	125.2	2.5	226.6	12.09	12.40	0.31	1.67	0.63	0.3	0.04	0.0		
	3/7/2017 13:10	4.14	4.14	46.51	130.2	5.0	231.6	11.90	12.19	0.29	1.48	0.63	1.2	0.16	0.2		
	3/10/2017 10:02	2.87	2.87	49.38	132.8	2.6	234.2	11.35	11.78	0.43	0.93	0.63	0.9	0.12	0.1		
	3/16/2017 10:56	6.04	6.03	55.41	138.9	6.1	240.3	12.24	12.50	0.26	1.82	0.63	1.0	0.14	0.2		
	3/23/2017 10:23	6.98	6.98	62.39	138.9	0.0	240.3	11.91	12.23	0.32	1.49	0.63	0.0	0.00	0.0		
	3/31/2017 8:41	7.93	7.67	70.06	144.9	6.0	246.3	11.85	12.19	0.34	1.43	0.63	0.8	0.10	0.1		
	4/3/2017 10:10	3.06	3.06	73.12	146.7	1.8	248.1	11.88	12.08	0.20	1.46	0.63	0.6	0.08	0.1		
	4/13/2017 11:28	10.05	10.05	83.17	153.9	7.2	255.3	11.80	11.95	0.15	1.38	0.63	0.7	0.10	0.1		
	4/18/2017 11:04	4.98	4.98	88.16	156.6	2.7	258.0	12.11	12.29	0.18	1.69	0.63	0.5	0.07	0.1		
	4/27/2017 11:20	9.01	9.01	97.17	160.9	4.3	262.3	10.98	11.14	0.16	0.56	0.63	0.5	0.06	0.1	0.2	
<b>END OF TEST</b>																	
First Intermittent Skimming Event	3/7/2018 14:30	--	--	97.17	0.0	--	262.3	10.90	14.11	3.21	--	--	--	--	--	--	
	3/7/2018 15:45	0.05	0.05	97.22	5.5	5.5	267.8	11.52	12.35	0.83	1.10	0.63	106.1	14.18	16.5		
	3/8/2018 9:03	0.72	0.62	97.84	5.5	1.5	269.3	11.59	11.95	0.36	1.17	0.63	2.4	0.32	0.4		
	3/15/2018 13:00	7.16	0.74	98.58	7.5	2.0	271.3	11.43	13.03	1.60	1.01	0.63	2.7	0.36	0.4		
	3/22/2018 12:00	6.96	5.08	103.66	44.5	37.0	308.3	12.04	12.67	0.63	1.62	0.63	7.3	0.97	1.1		
	3/29/2018 11:53	7.00	7.00	110.65	50.5	6.0	314.3	11.44	11.68	0.24	1.02	0.63	0.9	0.11	0.1		
	4/6/2018 11:10	7.97	7.97	118.62	51.5	1.0	315.3	11.93	12.24	0.31	1.51	0.63	0.1	0.02	0.0		
	4/12/2018 12:35	6.06	5.93	124.55	52.8	1.3	316.6	11.84	12.08	0.24	1.42	0.63	0.2	0.03	0.0		
	4/18/2018 13:22	6.03	6.03	130.58	57.5	4.7	321.3	11.86	12.08	0.22	1.44	0.63	0.8	0.10	0.1		
	4/27/2018 13:30	9.01	8.80	139.38	60.0	2.5	323.8	11.44	11.74	0.30	1.02	0.63	0.3	0.04	0.0		
	5/3/2018 14:23	6.04	6.04	145.42	61.0	1.0	324.8	11.60	11.88	0.28	1.18	0.63	0.2	0.02	0.0		
	5/9/2018 11:40	5.89	5														

## AW-10: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-10: LNAPL Transmissivity Decline Curve Analysis



## Appendix B

**AW-12 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

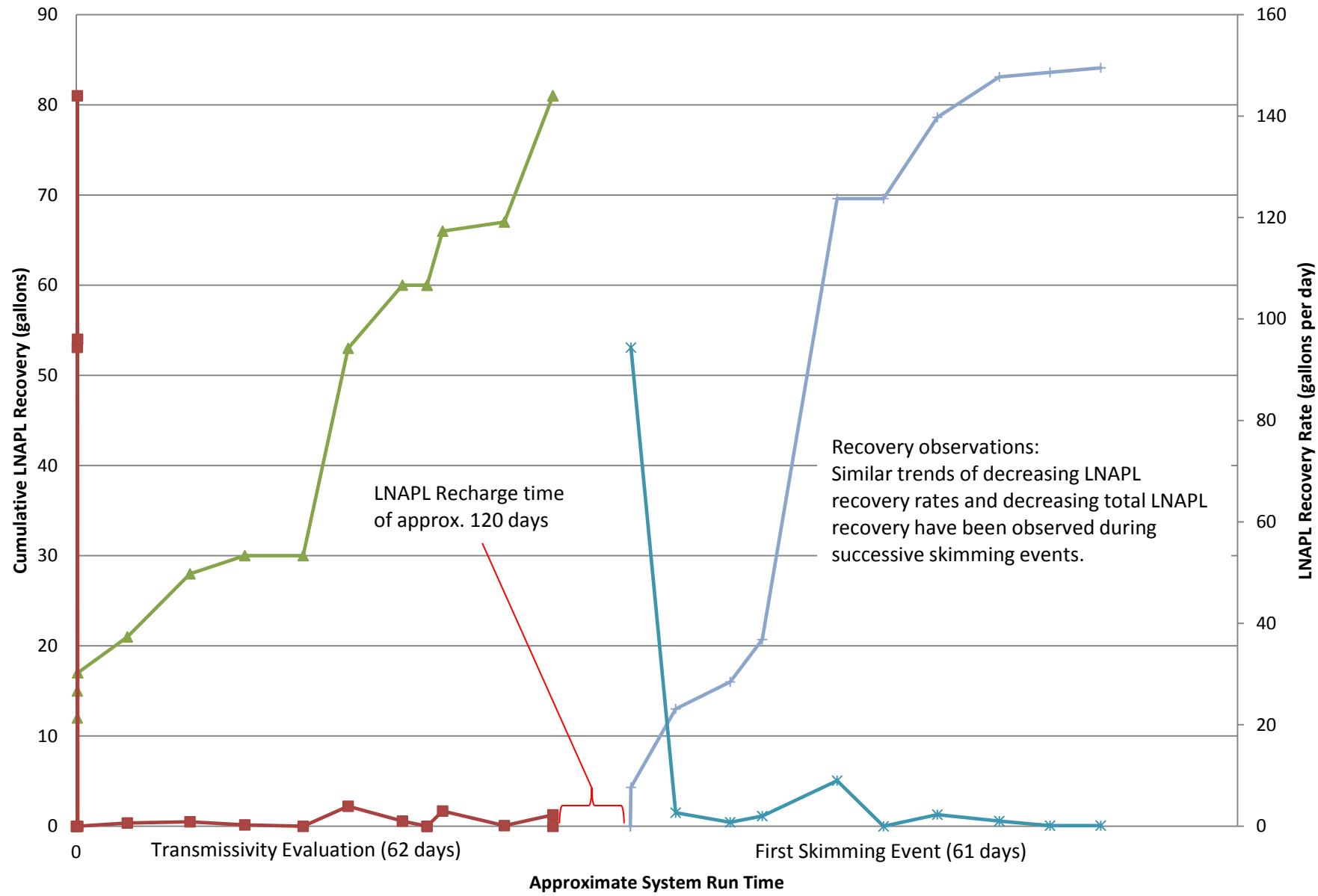
Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	<b>Equilibrium</b>						<b>8.60</b>	<b>14.81</b>	<b>6.21</b>	--	<b>1.07</b>		--	--	--		
<b>AW-12 Short Term Test</b>	9/22/2016 11:45	--	--	--	--	--	5.47	16.20	10.73	--		--	--	--	--		
	9/28/2016 8:55	5.88	5.88	5.88	24.6	24.6	24.6	11.31	11.41	0.10	2.71		1.07	4.2	0.56	0.4	
	10/5/2016 13:03	7.17		13.05	30.5	5.9	30.5	11.18	12.26	1.08	2.58		1.07	0.8	0.11	0.08	0.08
<b>AW-12 Long Term Test</b>	12/6/2017 11:17	--	--	0.00	--	--	30.5	11.24	17.11	5.87	--		--	--	--	--	
	12/6/2017 14:20	0.13	0.13	0.13	12.0	12.0	42.5	10.48	12.47	1.99	1.88		1.07	94.4	12.62	8.6	
	12/6/2017 14:50	0.02	0.02	0.15	15.0	3.0	45.5	11.70	12.20	0.50	3.10		1.07	144.0	19.25	13.2	
	12/6/2017 15:20	0.02	0.02	0.17	17.0	2.0	47.5	11.81	12.19	0.38	3.21		1.07	96.0	12.83	8.8	
	12/6/2017 15:50	0.02	0.02	0.19	17.0	0.0	47.5	11.53	11.81	0.28	2.93		1.07	0.0	0.00	0.0	
	12/13/2017 10:24	6.77	6.40	6.59	21.0	4.0	51.5	12.00	12.15	0.15	3.40		1.07	0.6	0.08	0.1	
	12/21/2017 12:45	8.10	8.10	14.69	28.0	7.0	58.5	12.00	12.15	0.15	3.40		1.07	0.9	0.12	0.1	
	12/28/2017 14:34	7.08	7.08	21.77	30.0	2.0	60.5	11.98	12.21	0.23	3.38		1.07	0.3	0.04	0.0	
	1/5/2018 13:43	7.96	7.53	29.30	30.0	0.0	60.5	11.80	11.90	0.10	3.20		1.07	0.0	0.00	0.0	
	1/12/2018 12:51	6.96	5.82	35.11	53.0	23.0	83.5	11.41	11.93	0.52	2.81		1.07	4.0	0.53	0.4	
	1/19/2018 13:25	7.02	7.02	42.14	60.0	7.0	90.5	11.52	11.69	0.17	2.92		1.07	1.0	0.13	0.1	
	1/26/2018 11:12	6.91	3.18	45.31	60.0	0.0	90.5	12.33	13.05	0.72	3.73		1.07	0.0	0.00	0.0	
	2/1/2018 11:56	6.03	0.00	45.31	60.0	0.0	90.5	11.61	11.83	0.22	3.01		1.07	0.0	0.00	0.0	
	2/7/2018 8:35	5.86	2.01	47.33	66.0	6.0	96.5	12.17	12.20	0.03	3.57		1.07	3.0	0.40	0.3	
	2/15/2018 11:56	8.14	7.95	55.28	67.0	1.0	97.5	11.78	11.94	0.16	3.18		1.07	0.1	0.02	0.0	
	2/22/2018 13:07	7.05	6.29	61.56	81.0	14.0	111.5	12.28	12.30	0.02	3.68		1.07	2.2	0.30	0.2	0.08
	2/28/2018 9:55	5.87	0.00	61.56	81.0	0.0	111.5	11.51	11.70	0.19	2.91		--	--	--	--	
<b>END OF TEST INTERVAL</b>																	
<b>AW-12 First Intermittent Event</b>	6/14/2018 11:10	--	--	0.00	0.0	0.0	111.5	10.80	14.00	3.20	--		--	--	--		
	6/22/2018 13:26	--	0.00	0.00	0.0	0.0	111.5	11.38	16.38	5.00	2.78		--	--	--		
	6/22/2018 15:25	0.08	0.08	0.08	4.3	4.3	115.8	11.76	13.76	2.00	3.16		1.07	53.1	7.09	4.9	
	6/28/2018 9:58	5.77	5.77	5.85	13.0	8.7	124.5	11.40	11.63	0.23	2.80		1.07	1.5	0.20	0.1	
	7/5/2018 10:52	7.04	7.04	12.89	16.0	3.0	127.5	11.52	11.56	0.04	2.92		1.07	0.4	0.06	0.0	
	7/9/2018 14:45	4.16	4.16	17.05	20.7	4.7	132.2	11.38	11.53	0.15	2.78		1.07	1.1	0.15	0.1	
	7/19/2018 11:06	9.85	9.66	26.71	69.6	48.9	181.1	11.42	11.73	0.31	2.82		1.07	5.1	0.68	0.5	
	7/25/2018 11:02	6.00	6.00	32.71	69.6	0.0	181.1	11.13	11.36	0.23	2.53		1.07	0.0	0.00	0.0	
	8/1/2018 9:59	6.96	6.96	39.66	78.6	9.0	190.1	11.46	11.51	0.05	2.86		1.07	1.3	0.17	0.1	
	8/9/2018 10:10	8.01	8.01	47.67	83.1	4.5	194.6	11.26	11.29	0.03	2.66		1.07	0.6	0.08	0.1	
	8/16/2018 10:27	7.01	6.55	54.22	83.6	0.5	195.1	11.48	11.66	0.18	2.88		1.07	0.1	0.01	0.0	
	8/23/2018 11:01	7.02	6.55	60.77	84.1	0.5	195.6	11.38	11.53	0.15	2.78		1.07	0.1	0.01	0.0	0.05
<b>END OF TEST INTERVAL</b>																	

0.8275

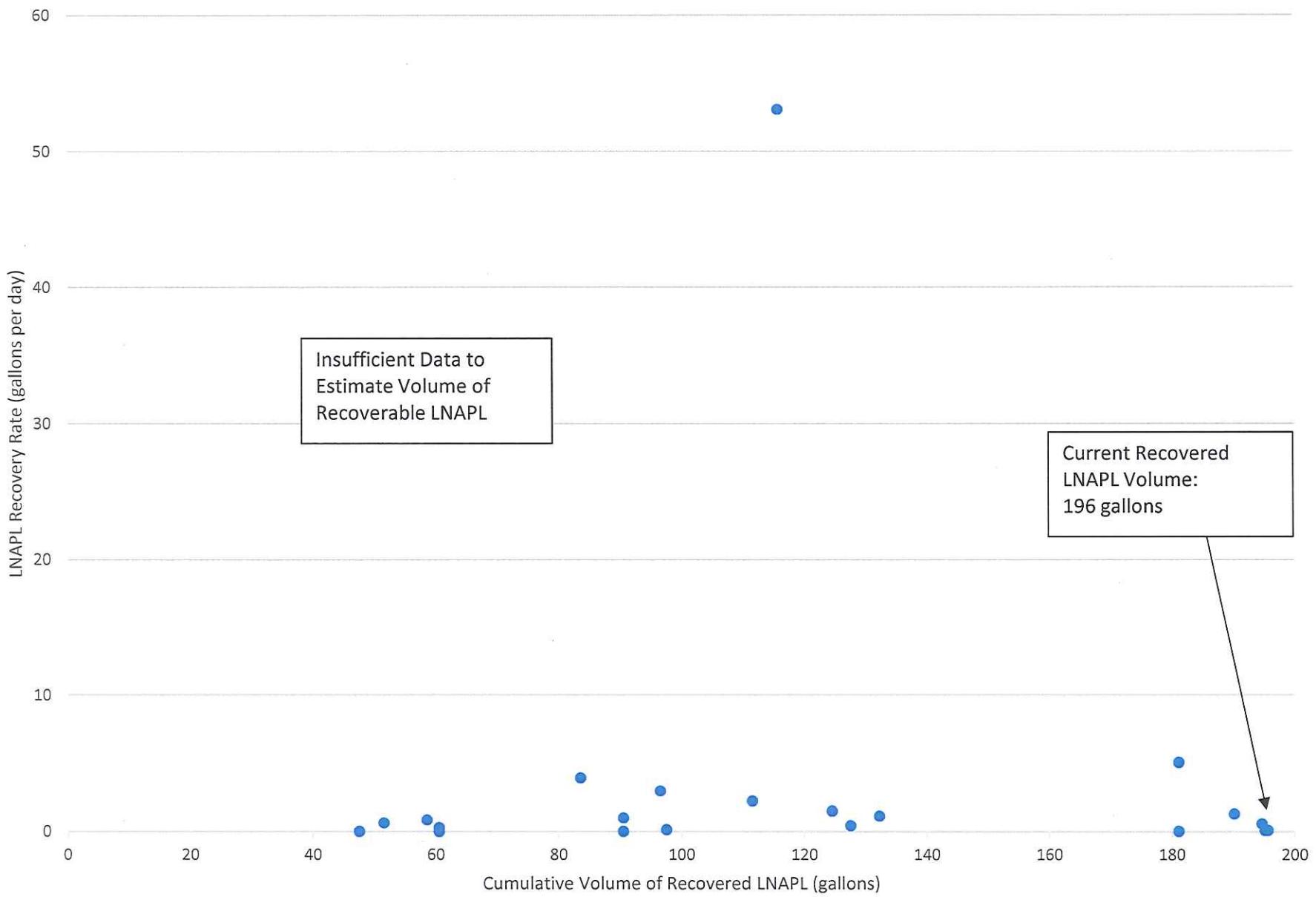
All calculations performed pursuant to the methodology detailed in ASTM E2856-13

<sup>a</sup>The maximum theoretical drawdown is used for each interval calculation where the measured drawdown is negative or where it exceeds the theoretical maximum.<sup>b</sup>Represents the geometric mean of the stabilized recovery rates/LNAPL transmissivity estimates (i.e., excludes initial elevated values that would not represent potential long-term recovery rates).

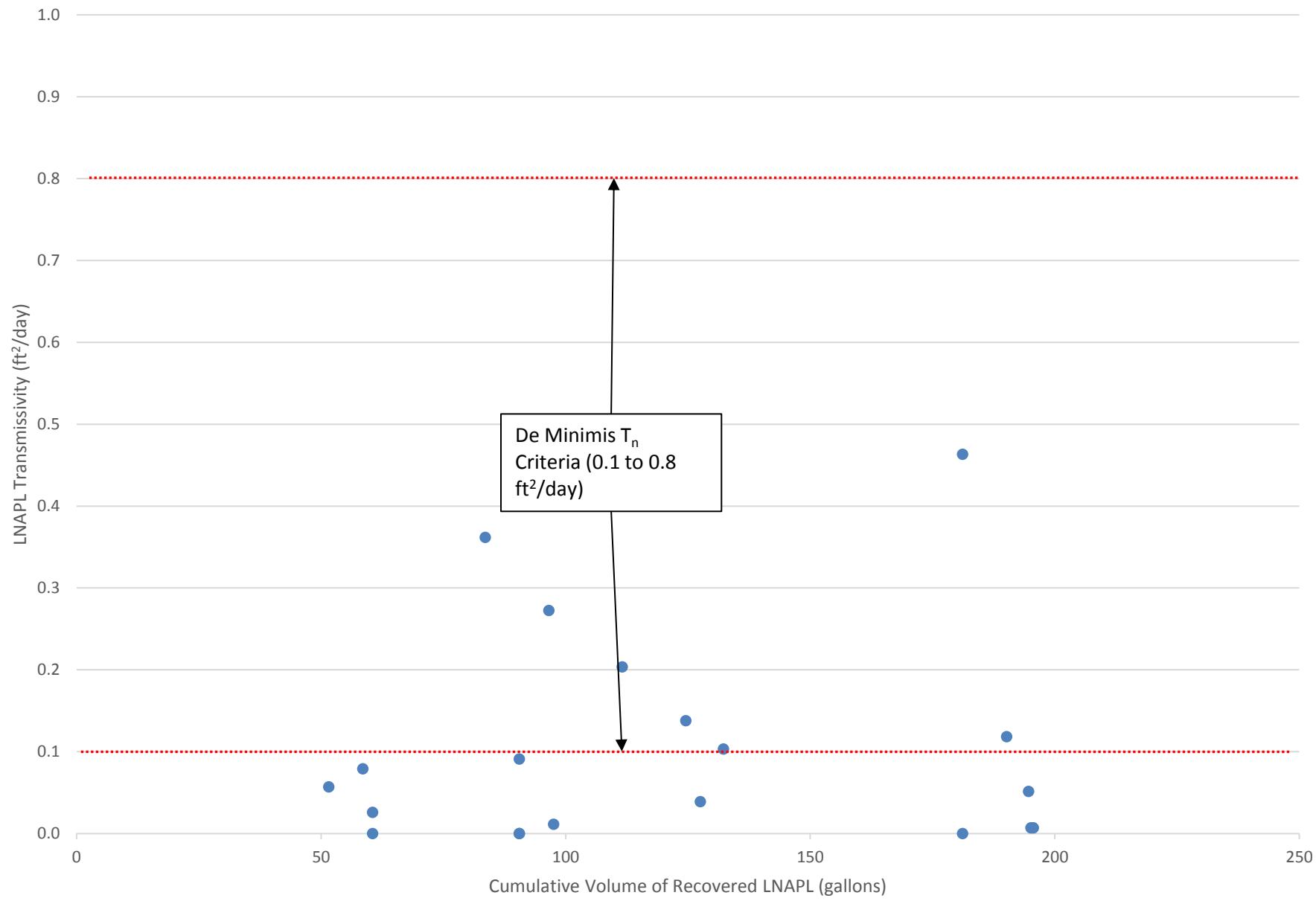
## AW-12: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-12: LNAPL Volumetric Recovery Decline Curve Analysis



## AW-12: LNAPL Transmissivity Decline Curve Analysis

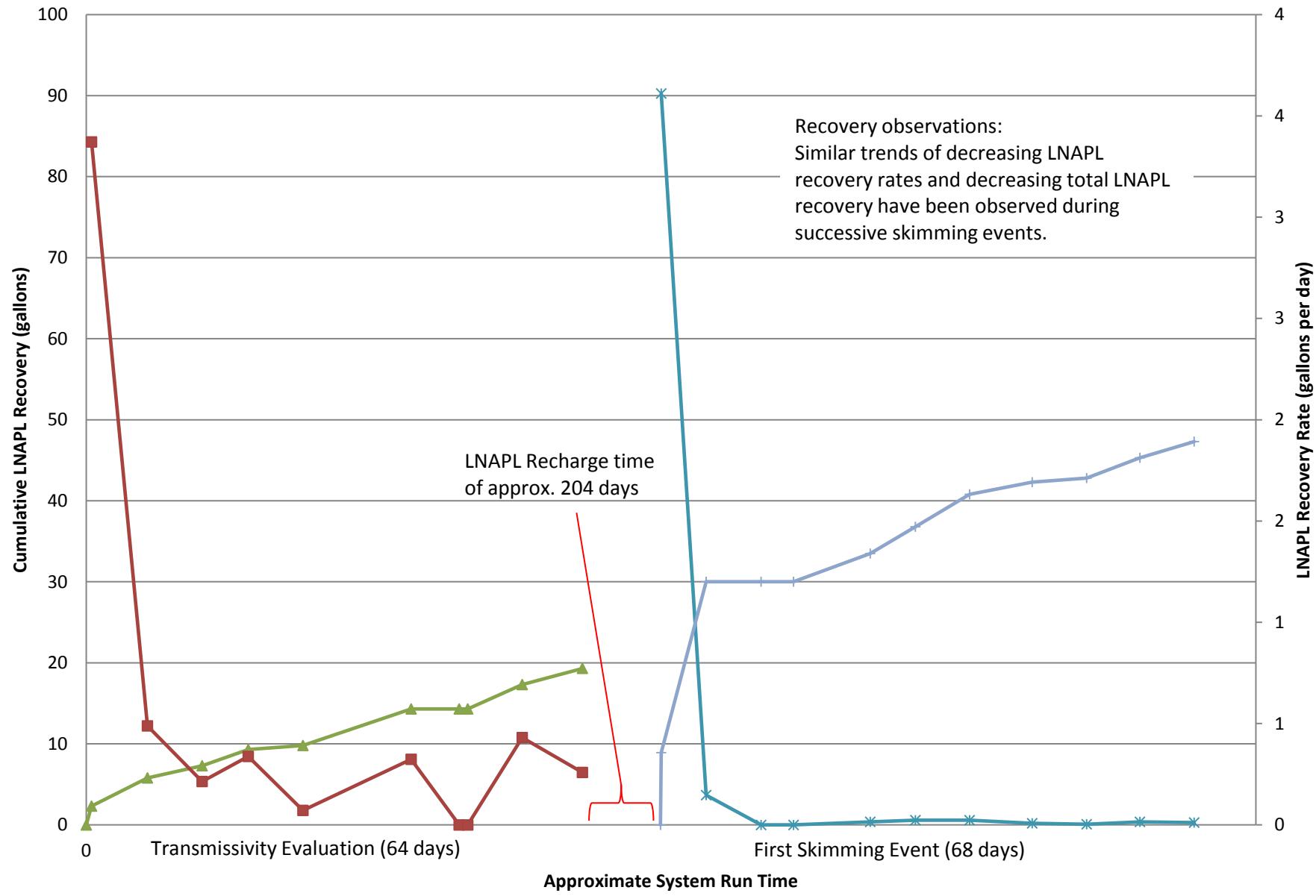


## Appendix B

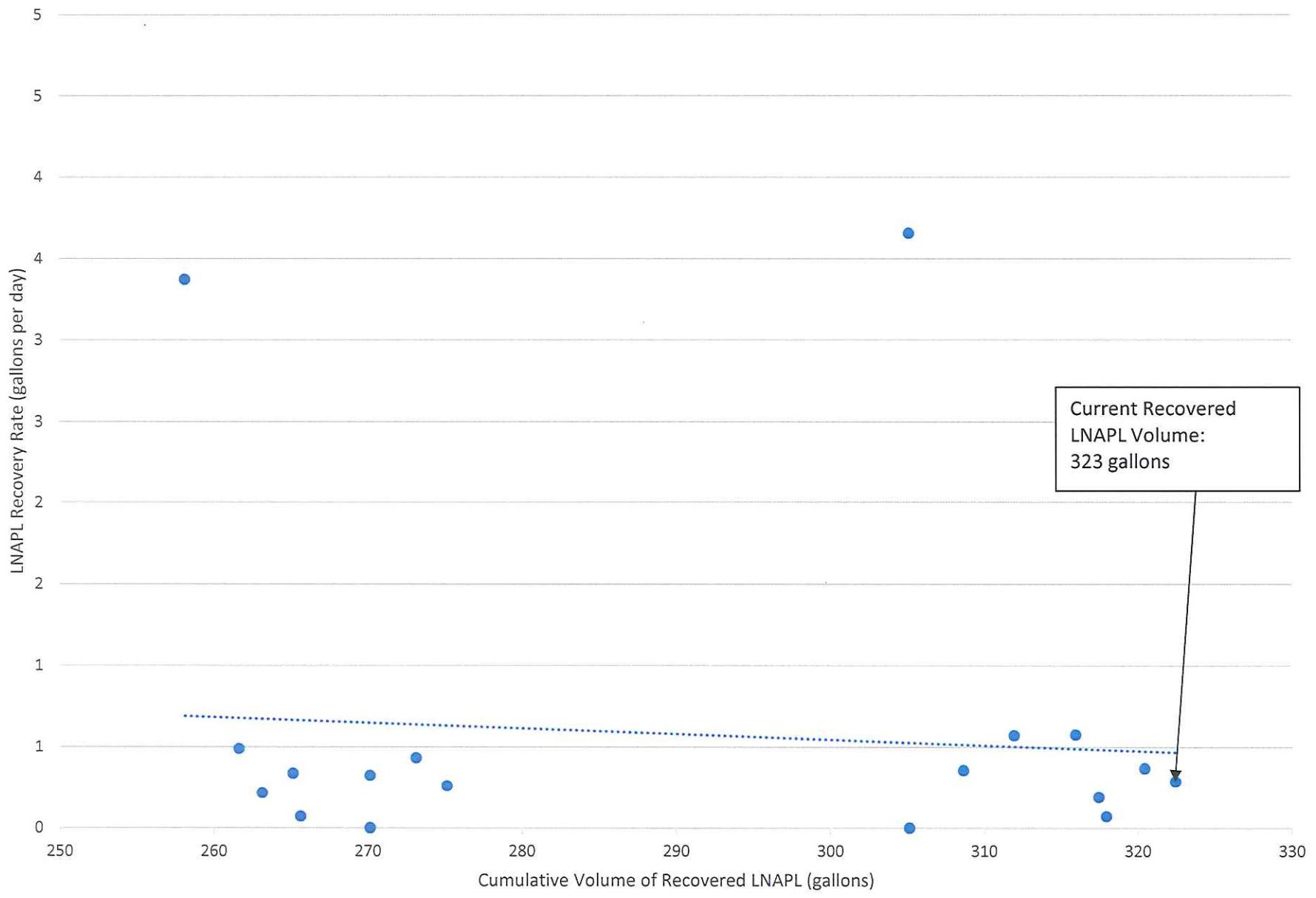
**AW-22 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>2</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium	--		--	--	--		11.91	15.46	3.55	--	0.52	--	--	--	--	
AW-22 Short Term Test	9/22/2016 11:45	--		--	--	--		11.20	15.75	4.55	--		--	--	--	--	
	9/28/2016 8:40	5.87	5.87	5.87	51.0	51.0	51.0	11.82	13.45	1.63	-0.09		0.52	8.7	1.16	1.6	
	10/5/2016 13:40	7.21	5.97	11.84	103.5	52.5	103.5	11.89	13.48	1.59	-0.02		0.52	8.8	1.18	1.7	
	<b>END OF TEST INTERVAL - SHUTDOWN DUE TO HURRICANE</b>																
	10/13/2016 12:50	7.97		0.00	0.0	0.0	103.5	10.15	13.85	3.70			--	--	--	--	
	10/20/2016 10:50	6.92	6.92	6.92	51.0	51.0	154.5	11.07	13.47	2.40	-0.84		0.52	7.4	0.99	1.4	
	<b>END OF TEST INTERVAL - DUE TO SKIMMER MALFUNCTION</b>																
	10/28/2016 10:50	--		--		--		10.78	13.17	2.39			--	--	--	--	
	11/4/2016 10:30	6.99	6.94	6.94	36.2	36.2	190.8	11.72	13.40	1.68	-0.19		0.52	5.2	0.70	1.0	
	11/16/2016 7:30	11.88	11.82	18.77	48.0	11.8	202.6	11.90	11.93	0.03	-0.01		0.52	1.0	0.13	0.2	
	11/22/2016 11:41	6.17	6.17	24.94	48.8	0.8	203.3	12.06	14.05	1.99	0.15		0.52	0.1	0.02	0.0	
	<b>END OF TEST INTERVAL - DUE TO SKIMMER MALFUNCTION</b>																
	11/29/2016 12:20	--	--	--	--	--		11.52	14.31	2.79			--	--	--	--	
	12/5/2016 12:15	6.00	5.99	5.99	37.3	37.3	240.7	12.71	13.65	0.94	0.80		0.52	6.2	0.83	1.2	
	12/7/2016 12:30	2.01	1.77	7.76	37.3	0.0	240.7	11.95	13.46	1.51	0.04		0.52	0.0	0.00	0.0	
	12/14/2016 9:24	6.87	6.38	14.14	37.3	0.0	240.7	12.26	12.35	0.09	0.35		0.52	0.0	0.00	0.0	
	12/21/2016 9:00	6.98	6.93	21.07	37.3	0.0	240.7	12.35	12.37	0.02	0.44		0.52	0.0	0.00	0.0	
	12/27/2016 12:00	6.13	6.08	27.14	37.3	0.0	240.7	11.90	12.12	0.22	-0.01		0.52	0.0	0.00	0.0	
	1/4/2017 11:06	7.96	7.91	35.05	37.3	0.0	240.7	12.69	12.80	0.11	0.78		0.52	0.0	0.00	0.0	
	1/9/2017 11:17	5.01	4.90	39.95	50.1	12.8	253.5	12.54	12.61	0.07	0.63		0.52	2.6	0.35	0.5	
	1/19/2017 8:20	9.88	9.81	49.75	52.5	2.4	255.9	12.67	12.73	0.06	0.76		0.52	0.2	0.03	0.0	
	<b>END OF TEST INTERVAL</b>																
AW-22 Long Term Test	9/21/2017 16:00	--	--	0.00	--	--	--	10.44	14.20	3.76	--		--	--	--	--	
	9/22/2017 8:44	0.70	0.68	0.68	2.3	2.3	258.2	11.59	11.65	0.06	-0.32		0.52	3.4	0.45	0.63	
	9/29/2017 12:43	7.17	7.17	7.85	5.8	3.5	261.7	11.65	11.68	0.03	-0.26		0.52	0.5	0.07	0.09	
	10/6/2017 12:42	7.00	7.00	14.85	7.3	1.5	263.2	11.41	11.50	0.09	-0.50		0.52	0.2	0.03	0.04	
	10/12/2017 10:55	5.93	5.93	20.77	9.3	2.0	265.2	12.22	12.40	0.18	0.31		0.52	0.3	0.05	0.06	
	10/19/2017 11:05	7.01	7.01	27.78	9.8	0.5	265.7	11.60	11.72	0.12	-0.31		0.52	0.1	0.01	0.01	
	11/2/2017 8:32	13.89	13.89	41.67	14.3	4.5	270.2	12.76	12.86	0.10	0.85		0.52	0.3	0.04	0.06	
	11/8/2017 11:57	6.14	6.14	47.82	14.3	0.0	270.2	12.60	12.82	0.22	0.69		0.52	0.0	0.00	0.00	
	11/15/2017 11:09	6.97	1.12	48.94	14.3	0.0	270.2	12.30	12.81	0.51	0.39		0.52	0.0	0.00	0.00	
	11/22/2017 10:06	6.96	6.96	55.89	17.3	3.0	273.2	12.87	13.07	0.20	0.96		0.52	0.4	0.06	0.08	
	11/30/2017 9:42	7.98	7.74	63.64	19.3	2.0	275.2	12.65	12.84	0.19	0.74		0.52	0.3	0.03	0.05	
AW-22 First Intermittent Skimming Event	<b>TEST COMPLETED</b>																
	6/14/2018 11:00	--	--	0.00	--	--	275.2	11.49	13.85	2.36	--		--	--	--	--	
	6/22/2018 12:56	--	--	0.00	0.0	0.0	275.2	12.12	14.51	2.39	0.21		--	--	--	--	
	6/22/2018 15:18	0.10	0.10	0.10	8.9	8.9	284.1	12.92	13.15	0.23	1.01		0.52	90.3	12.06	17.0	
	6/28/2018 9:47	5.77	5.77	5.87	30.0	21.1	305.2	12.43	12.45	0.02	0.52		0.52	3.7	0.49	0.69	
	7/5/2018 10:45	7.04	7.04	12.91	30.0	0.0	305.2	12.73	12.94	0.21	0.82		0.52	0.0	0.00	0.00	
	7/9/2018 14:37	4.16	4.16	17.07	30.0	0.0	305.2	12.26	12.36	0.10	0.35		0.52	0.0	0.00	0.00	
	7/19/2018 11:00	9.85	9.85	26.92	33.5	3.5	308.7	12.55	12.60	0.05	0.64		0.52	0.4	0.05	0.07	
	7/25/2018 10:56	6.00	5.78	32.70	36.8	3.3	312.0	12.31	12.37	0.06	0.40		0.52	0.6	0.		

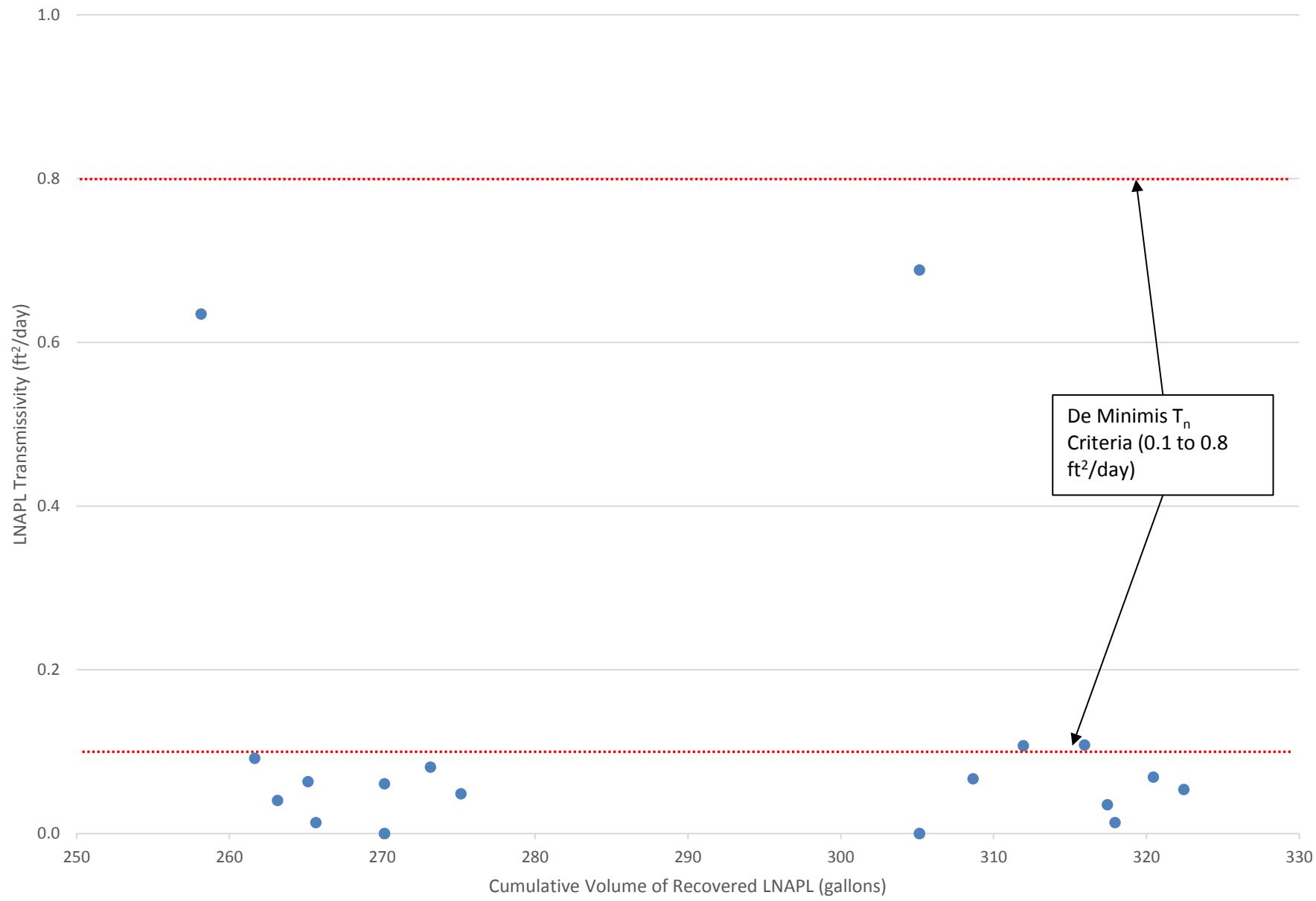
## AW-22: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-22: LNAPL Volumetric Recovery Decline Curve Analysis



## AW-22: LNAPL Transmissivity Decline Curve Analysis



## Appendix B

**AW-54 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium	--	--	--	--	--	5.44	15.59	10.15	--	1.48	--	--	--	--	--	
AW-54 Short Term Test	8/25/2016 10:45	--	--	--	--	--	5.45	15.48	10.03	--	--	--	--	--	--	--	
	8/31/2016 11:15	6.02	4.46	4.46	50.0	50.0	50.0	6.15	10.55	4.40	0.71	1.48	11.2	1.50	0.7		
	9/7/2016 14:15	7.13	5.13	9.59	100.0	50.0	100.0	--	--	--	--	1.48	9.7	1.30	0.6		
	9/14/2016 14:30	7.01	5.26	14.84	150.0	50.0	150.0	6.48	9.24	2.76	1.04	1.48	9.5	1.27	0.6		
	9/21/2016 12:20	6.91	7.53	22.37	200.0	50.0	200.0	6.10	7.60	1.50	0.66	1.48	6.6	0.89	0.4	0.6	
AW-54 Long Term Test	6/20/2017 8:45	--	--	0.00	0.0	--	--	5.40	15.82	10.42	--	--	--	--	--	--	
	6/20/2017 10:47	0.08	0.08	0.08	6.0	6.0	206.0	5.90	13.30	7.40	0.46	1.48	70.8	9.47	4.7		
	6/22/2017 9:54	1.96	1.96	2.05	18.0	12.0	218.0	5.30	13.82	8.52	-0.14	1.48	6.1	0.82	0.4		
	6/26/2017 10:48	6.00	4.02	4.11	18.0	0.0	218.0	5.55	16.15	10.60	0.11	1.48	0.0	0.00	0.0		
	6/30/2017 10:50	4.00	2.40	6.51	78.5	60.5	278.5	5.90	11.65	5.75	0.46	1.48	25.2	3.37	1.7		
	7/7/2017 11:58	7.05	0.00	6.51	78.5	0.0	278.5	--	--	--	--	--	--	--	--		
	7/12/2017 14:52	5.12	5.12	11.63	112.5	34.0	312.5	6.25	6.50	0.25	0.81	1.48	6.6	0.89	0.4		
	7/19/2017 10:50	6.83	6.70	18.32	112.5	0.0	312.5	5.62	5.85	0.23	0.18	1.48	0.0	0.00	0.0		
	7/26/2017 10:35	6.99	6.99	25.31	115.0	2.5	315.0	6.00	6.42	0.42	0.56	1.48	0.4	0.05	0.0		
	8/2/2017 10:48	7.01	7.01	32.32	116.5	1.5	316.5	6.26	6.57	0.31	0.82	1.48	0.2	0.03	0.0		
	8/9/2017 9:04	6.93	6.79	39.11	118.5	2.0	318.5	6.12	6.32	0.20	0.68	1.48	0.3	0.04	0.0		
	8/17/2017 8:05	7.96	7.96	47.07	119.5	1.0	319.5	6.08	6.35	0.27	0.64	1.48	0.1	0.02	0.0		
	8/22/2017 13:05	5.21	5.21	52.28	119.5	0.0	319.5	6.95	7.12	0.17	1.51	1.48	0.0	0.00	0.0	0.13	
	End of Test																
	8/29/2017 16:00	12.33					6.00	8.56	2.56								
First Intermittent Skimming Event	3/7/2018 13:42	--	--	52.28	0.0	--	319.5	5.25	15.40	10.15	--	--	--	--	--		
	3/7/2018 15:52	0.09	0.09	52.37	5.0	5.0	324.5	6.14	11.60	5.46	0.70	1.48	55.4	7.40	3.7		
	3/8/2018 8:45	0.70	0.70	53.07	11.5	6.5	331.0	6.79	6.90	0.11	1.35	1.48	9.2	1.24	0.6		
	3/15/2018 13:15	7.19	5.37	58.44	11.5	0.0	331.0	6.59	6.80	0.21	1.15	1.48	0.0	0.00	0.0		
	3/22/2018 12:55	6.99	6.99	65.43	13.5	2.0	333.0	6.85	7.01	0.16	1.41	1.48	0.3	0.04	0.0		
	3/29/2018 11:44	6.95	6.95	72.38	13.5	0.0	333.0	6.46	6.80	0.34	1.02	1.48	0.0	0.00	0.0		
	4/6/2018 11:38	8.00	8.00	80.37	13.5	0.0	333.0	6.90	7.06	0.16	1.46	1.48	0.0	0.00	0.0		
	4/12/2018 12:50	6.05	5.78	86.15	13.5	0.0	333.0	6.64	7.18	0.54	1.20	1.48	0.0	0.00	0.0		
	4/18/2018 13:32	6.03	6.01	92.16	13.5	0.0	333.0	6.60	6.80	0.20	1.16	1.48	0.0	0.00	0.0		
	4/27/2018 13:39	9.00	9.00	101.17	13.5	0.0	333.0	6.26	6.42	0.16	0.82	1.48	0.0	0.00	0.0		
	5/3/2018 14:00	6.01	6.01	107.18	14.5	1.0	334.0	6.79	7.00	0.21	1.35	1.48	0.2	0.02	0.0		
	5/9/2018 11:50	5.91	5.91	113.09	14.5	0.0	334.0	6.70	6.90	0.20	1.26	1.48	0.0	0.00	0.0		
	5/17/2018 13:13	8.06	7.80	120.89	16.5	2.0	336.0	6.61	6.80	0.19	1.17	1.48	0.3	0.03	0.0		
	5/25/2018 12:51	7.98	7.98	128.87	17.8	1.3	337.3	6.08	6.31	0.23	0.64	1.48	0.2	0.02	0.0		
	5/31/2018 10:58	5.92	5.92	134.79	17.8	0.0	337.3	--	--	--	--	1.48	0.0	0.00	0.0		
	6/7/2018 13:27	7.10	7.10	141.90	17.8	0.0	337.3	6.09	6.15	0.06	0.65	1.48	0.0	0.00	0.0	0.05	
	6/14/2018 10:36	6.88	6.88	148.78	21.0	3.2	340.5	5.54	5.71	0.17	0.10	1.48	0.5	0.06	0.0	0.01	

0.854

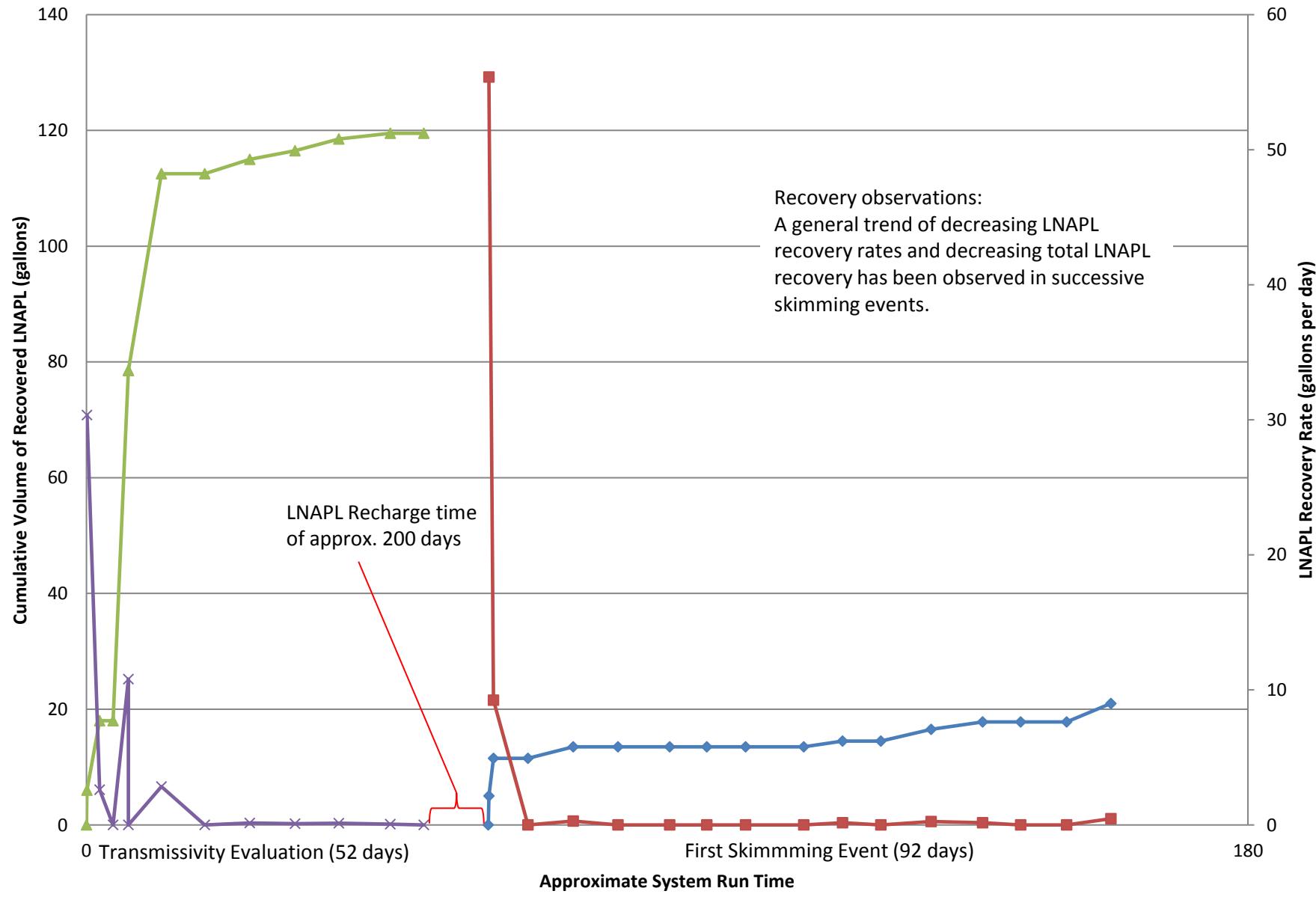
Assumed LNAPL specific gravity =

All calculations performed pursuant to the methodology detailed in ASTM E2856-13

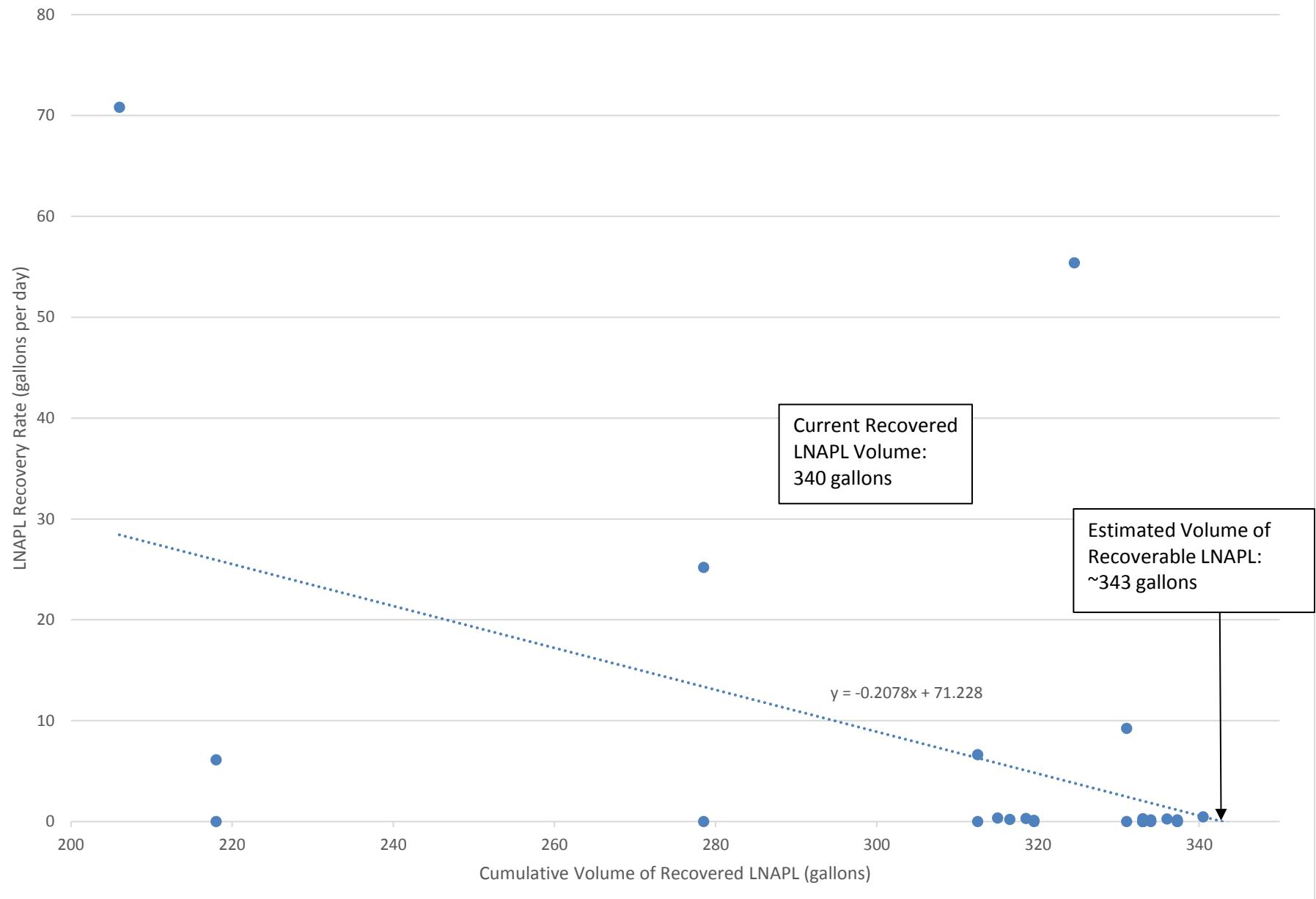
<sup>a</sup>The maximum theoretical drawdown is used for each interval calculation where the measured drawdown is negative or where it exceeds the theoretical maximum.<sup>b</sup>Represents the geometric mean of the stabilized recovery rates/LNAPL transmissivity estimates (i.e., excludes initial elevated values that would not represent potential long-term recovery rates).

Equilibrium data is an average of quarterly groundwater data collected from March 2016 through February 2018 and excludes data collected during or following skimming operations.

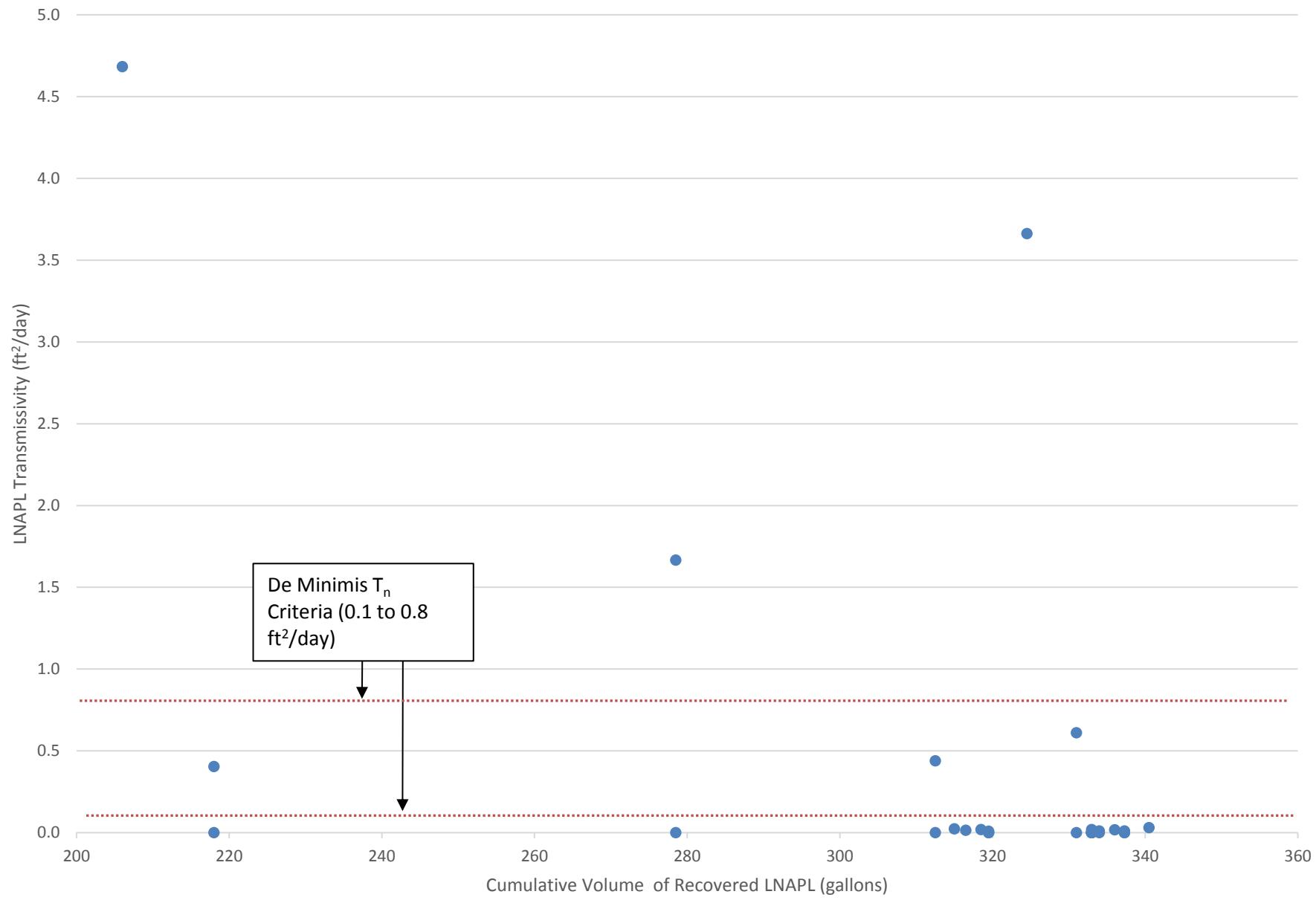
## AW-54: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-54: LNAPL Volumetric Recovery Decline Curve Analysis



## AW-54: LNAPL Transmissivity Decline Curve Analysis



## Appendix B

**AW-68 LNAPL Skimming Test Results**  
**IMTT Savannah North Terminal**  
**Savannah, Georgia**

Well ID	Measurement Date & Time	Time Between Measurement Events (days)	Actual Skimmer Run-Time Between Measurement Events (days)	Cumulative Run Time (days)	Total Volume of LNAPL Recovered (gallons)	Volume of LNAPL Recovered During Measurement Interval (gallons)	RUNNING Total Volume of LNAPL Recovered (gallons)	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	In-Well LNAPL Thickness (feet)	LNAPL Drawdown (feet)	Maximum Theoretical Unconfined LNAPL Drawdown (feet)	LNAPL Drawdown Used in Transmissivity Estimate <sup>a</sup> (feet)	Average LNAPL Recovery Rate for Interval (gal/day)	Average LNAPL Recovery Rate for Interval (ft <sup>3</sup> /day)	Estimated LNAPL Transmissivity for Interval (ft <sup>2</sup> /day)	Overall Average LNAPL Transmissivity <sup>b</sup> (ft <sup>2</sup> /day)
	Equilibrium							10.80	17.07	6.27	--	0.92	--	--	--		
AW-68 Short term test	5/17/2016 11:30	--		--	--	--		11.40	15.11	3.71	--	--	--	--	--		
	5/20/2016 9:15	2.91	2.91	2.91	5.2	5.2	5.2	10.74	10.91	0.17	-0.06	0.92	1.8	0.24	0.2		
	5/25/2016 11:00	5.07	3.60	6.51	6.6	1.4	6.6	10.43	10.76	0.33	-0.37	0.92	0.4	0.05	0.04		
	6/1/2016 13:00	7.08	4.04	10.55	6.9	0.3	6.9	11.46	11.84	0.38	0.66	0.92	0.1	0.010	0.01		
	6/8/2016 12:15	6.97	6.97	17.51	13.2	6.3	13.2	9.90	10.85	0.95	-0.90	0.92	0.9	0.12	0.10	0.0	
AW-68 Long term test	11/30/2017 9:50	--	0.00	--	--	--	10.83	17.17	6.34	--	--	--	--	--	--		
	12/6/2017 11:08	6.05	6.05	6.05	0.0	0.0	13.2	10.12	15.15	5.03	-0.68	0.92	0.0	0.00	0.0		
	12/6/2017 14:20	0.13	0.13	6.18	12.0	12.0	25.2	11.11	13.05	1.94	0.31	0.92	90.0	12.03	9.6		
	12/6/2017 14:50	0.02	0.02	6.20	13.0	1.0	26.2	11.36	12.45	1.09	0.56	0.92	48.0	6.42	5.1		
	12/6/2017 15:20	0.02	0.02	6.22	14.0	1.0	27.2	11.60	12.35	0.75	0.80	0.92	48.0	6.42	5.1		
	12/6/2017 15:50	0.02	0.02	6.25	16.0	2.0	29.2	11.89	12.27	0.38	1.09	0.92	96.0	12.83	10.2		
	12/13/2017 10:40	6.78	6.34	12.59	42.0	26.0	55.2	12.36	12.61	0.25	1.56	0.92	4.1	0.55	0.4		
	12/21/2017 12:31	8.08	8.08	20.67	82.0	40.0	95.2	11.35	11.37	0.02	0.55	0.92	5.0	0.66	0.5		
	12/28/2017 13:23	7.04	7.04	27.70	169.0	87.0	182.2	12.10	12.17	0.07	1.30	0.92	12.4	1.65	1.3		
	1/5/2018 13:23	8.00	7.80	35.50	177.0	8.0	190.2	11.33	11.35	0.02	0.53	0.92	1.0	0.14	0.1		
	1/12/2018 12:39	6.97	6.97	42.47	177.0	0.0	190.2	12.59	12.65	0.06	1.79	0.92	0.0	0.00	0.0		
	1/19/2018 13:04	7.02	7.02	49.49	177.0	0.0	190.2	11.51	11.86	0.35	0.71	0.92	0.0	0.00	0.0		
	1/26/2018 11:25	6.93	6.93	56.42	180.0	3.0	193.2	12.78	13.95	1.17	1.98	0.92	0.4	0.06	0.0		
	2/1/2018 11:36	6.01	5.81	62.23	180.0	0.0	193.2	11.23	11.43	0.20	0.43	0.92	0.0	0.00	0.0		
	2/7/2018 8:25	5.87	5.87	68.10	181.0	1.0	194.2	12.65	13.05	0.40	1.85	0.92	0.2	0.02	0.0		
	2/15/2018 12:02	8.15	8.15	76.25	208.0	27.0	221.2	11.64	11.71	0.07	0.84	0.92	3.3	0.44	0.4		
	2/22/2018 12:57	7.04	7.04	83.28	208.0	0.0	221.2	11.41	11.72	0.31	0.61	0.92	0.0	0.00	0.0		
	2/28/2018 7:52	5.79	5.58	88.87	211.0	3.0	224.2	10.86	11.05	0.19	0.06	0.92	0.5	0.07	0.1		
	3/7/2018 11:30	7.15	7.15	96.02	211.5	0.5	224.7	11.49	11.78	0.29	0.69	0.92	0.1	0.01	0.0	0.12	
	Test Completed																
1st Intermittent Skimming Event	8/30/2018 10:40	--	0.00	--	--	224.7	10.88	14.62	3.74	--	--	--	--	--	--		
	8/30/2018 12:37	0.08	0.07	4.0	4.0	4.0	228.7	11.17	11.30	0.13	0.37	0.92	55.9	7.48	5.9		
	9/5/2018 10:21	5.91	5.80	5.87	4.0	0.0	228.7	12.20	12.32	0.12	1.40	0.92	0.0	0.00	0.0		
	9/14/2018 13:17	9.12	9.12	14.99	4.1	0.1	228.8	10.50	10.76	0.26	-0.30	0.92	0.0	0.00	0.0		
	9/21/2018 12:15	6.96	6.96	21.95	4.1	0.0	228.8	12.05	12.20	0.15	1.25	0.92	0.0	0.00	0.0		
	9/25/2018 12:49	4.02	4.02	25.97	7.1	3.0	231.8	11.06	11.15	0.09	0.26	0.92	0.7	0.10	0.1		
	10/4/2018 11:22	8.94	8.75	34.72	9.1	2.0	233.8	12.48	12.74	0.26	1.68	0.92	0.2	0.03	0.0		
	10/10/2018 10:22	5.96	5.96	40.67	12.1	3.0	236.8	10.77	11.03	0.26	-0.03	0.92	0.5	0.07	0.1		
	10/16/2018 14:40	6.18	3.04	43.71	13.1	1.0	237.8	10.90	10.93	0.03	0.10	0.92	0.3	0.04	0.0		
	10/23/2018 12:35	6.91	0.00	43.71	13.1	0.0	237.8	11.35	11.51	0.16	0.55	0.92	0.0	0.00	0.0		
	11/1/2018 10:09	8.90	8.90	52.61	13.8	0.7	238.5	12.70	12.94	0.24	1.90	0.92	0.1	0.01	0.0		
	11/8/2018 14:42	7.19	7.19	59.80	13.8	0.0	238.5	12.02	12.12	0.10	1.22	0.92	0.0	0.00	0.0		

0.854

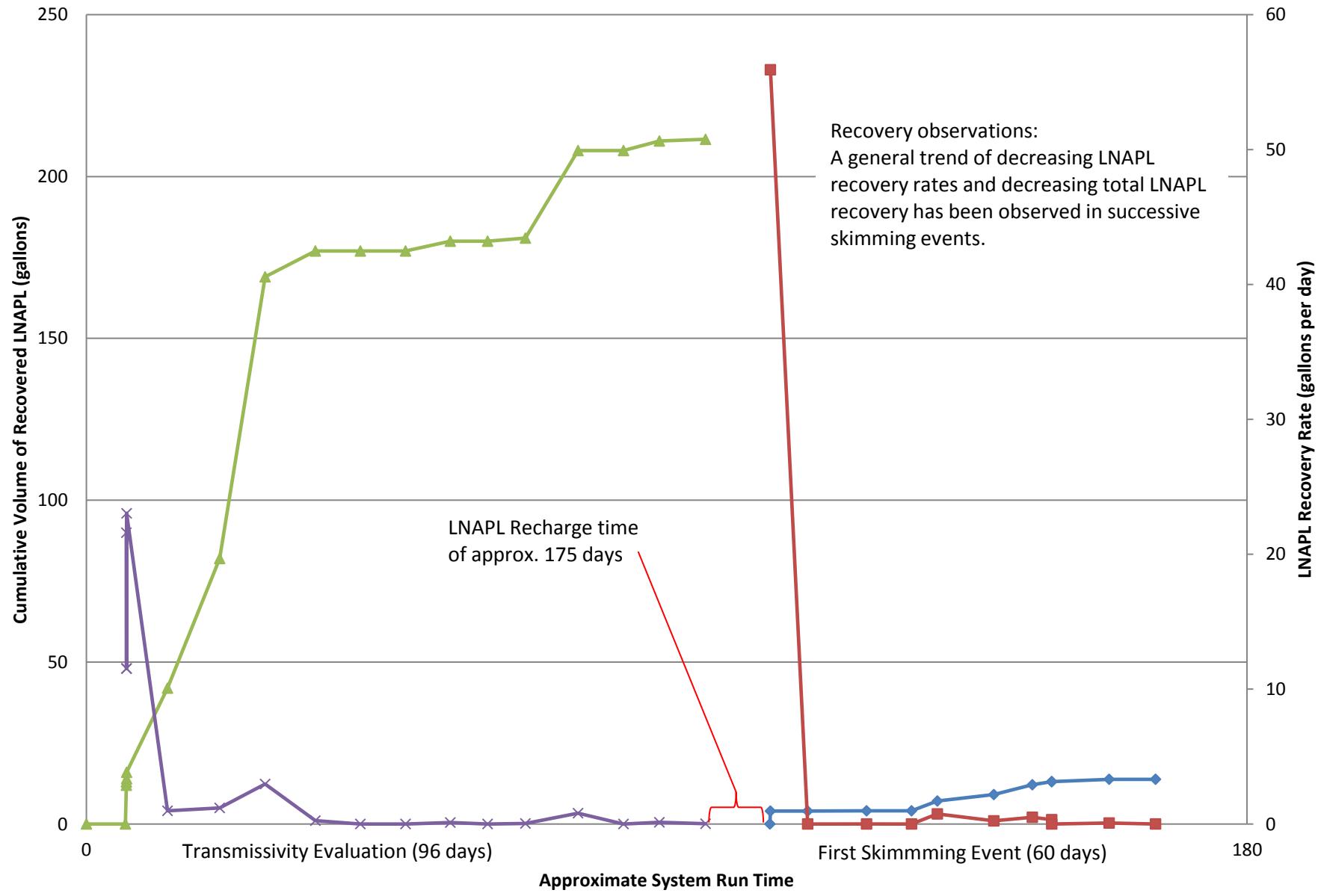
Assumed LNAPL specific gravity =

All calculations performed pursuant to the methodology detailed in ASTM E2856-13

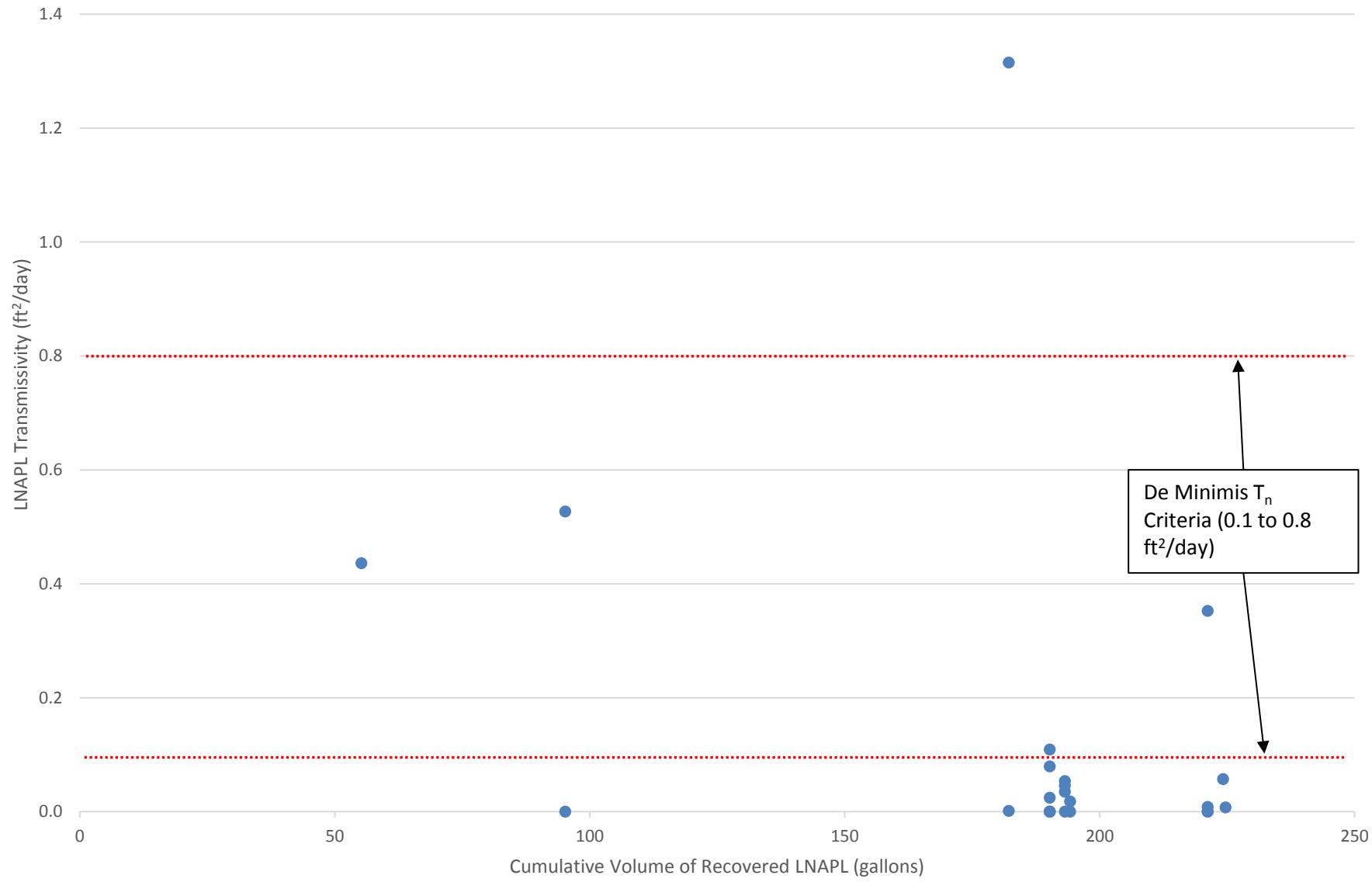
aThe maximum theoretical drawdown is used for each interval calculation where the measured drawdown is negative or where it exceeds the theoretical maximum.

bRepresents the geometric mean of the stabilized recovery rates/LNAPL transmissivity estimates (i.e., excludes initial elevated values that would not represent potential long-term recovery rates).

## AW-68: Cumulative LNAPL Recovery and LNAPL Recovery Rate Over Time



## AW-68: LNAPL Transmissivity Decline Curve Analysis



## **Appendix C**

### **Labor Hours Summary – May 1, 2018 through October 31, 2018**

**Labor Hours**  
**May 1, 2018 through October 31, 2018**  
**IMTT EPIC LLC Savannah North Terminal**  
**Savannah, Georgia**

<b>Category</b>	<b>May-18</b>	<b>Jun-18</b>	<b>Jul-18</b>	<b>Aug-18</b>	<b>Sep-18</b>	<b>Oct-18</b>
Professional Engineer Labor Hours	55	26.5	9	24	38.5	14
Total Labor Hours	227.25	85.5	81.75	86.25	118.25	125.75